CHAPTER 5

# Sampling and Design

One of the goals of any social science study is to describe or identify certain characteristics (variables) of some group or population in relation to those of another. When the population being studied is small, such as a group of 12 or 15 juveniles in a diversion program, the research could easily be accomplished by interviewing or observing all the patients. However, if the group to be studied is large, such as all U.S. adolescents using marijuana, it would be both impossible and highly inefficient to attempt interviewing, surveying, or observing all the individuals.

Fortunately, it is not necessary to systematically observe every member of a population (the full group with the characteristics of interest to the researcher). Rather, researchers need only to select a sample of this full population. If this sample is to represent the larger population accurately, it must be drawn carefully and according to certain rules of probability.

Typically, representative sampling strategies are used in survey research. However, the same basic strategies can be applied when identifying subjects for experimental studies, documents used in a textual content analysis, or people or places for observation (Berg, 2007).

The main objective of drawing a sample is to make inferences about the larger population from the smaller sample. Regardless of how carefully the sample is drawn, it is unlikely that it will be identical to the larger population from which it came. We can, however, reasonably expect that the sample will closely resemble the larger group. Since use of the smaller group allows the research to proceed, we must accept the possibility of slight discrepancies.

## PROBABILITY SAMPLING

In a probability sampling strategy, the researcher specifies each segment of the population that will be represented in the sample. Basically, the sample is created by selecting units from the larger population. In a probability sample, the manner in which the sample units are selected is very important. The process usually entails drawing subjects from an identified population such that every unit in the larger population has precisely the same chance or probability of being selected as every other unit in that population. This process is known as *randomization*. In this process, the researcher assumes that, since every unit in the large population has precisely the same chance of being selected for the sample, characteristics possessed by the sample members resemble characteristics possessed by members of the larger population.

In order to accomplish this randomization and thereby achieve a *random sample* of participants for study, the researcher can use several different strategies. Among the most commonly used procedures is the random numbers table. Usually, the researcher arbitrarily selects a number with which to begin and then moves up, down, forward, backward, or across the table to continue selecting numbers. By identifying two points—a number for the vertical column and another for the horizontal row—we can locate a starting point for selecting a sample from a population listing.

Ten blocks of random numbers are arranged horizontally, and 10 are arranged vertically. Random numbers tables are usually found as appendixes of most statistics textbooks (see, for example, Appendix A, Chapter 8 of this book).

To illustrate use of a random numbers table, take a dollar bill from your pocket. Look at the first and last numbers of the serial number on the bill. These can be used as the vertical and horizontal guide numbers to enter a random numbers table. Let's say your numbers were 3 and 6. Go to the table and move to the third column of blocked numbers and the sixth row of blocked numbers. Now select any number between 1 and 5. Assume that you select 3. Now move across the row-3 numerals. This identifies your random number; let's say number 4.

At this point, some researchers would go through their list of people in the full population and identify every third name as part of the sample until the sample was filled. Other researchers would repeat this random-number selection and go through the list selecting the individual who corresponds to the randomly identified number from the table. This might mean selecting for a sample the 3rd, 8th, 12th, 15th, and so on. In the first case, the researcher would be conducting a systematic sampling strategy. You should be aware that systematic samples may be classified as probability or nonprobability samples, depending on how the starting point is selected and whether every possible element has an equal chance for inclusion. In the second case, the researcher would be using a simple random sampling protocol.

Other strategies for identifying a random sample may include placing all names of potential subjects in a hat, shaking them up, and simply drawing out names for the sample. Some researchers prefer to computerize their population list and have the computer randomly select some proportion of the full population. In general, there is no absolutely right or wrong way to identify a sample. The single principle that must be maintained is that every unit of the full population must have an equal chance of being drawn into the sample.

### Stratified Cluster Sampling (Multistage Sampling)

In random or systematical probability sampling, we sample the actual individuals or elements intended for inclusion in the study. In stratified cluster sampling, we begin by grouping elements that share certain characteristics. These groupings or strata are then used as categories to divide the working population. Our sample involves elements from every stratum. Cluster sampling, then, involves dividing the population into several large groups or clusters. The sampling actually occurs as we draw elements from each of these larger clusters.

In other words, stratified cluster sampling involves several stages. The first stage is to divide the working population into various strata, and the second stage is to draw the sample from these strata. This process can be repeated as many times as necessary to cluster the elements of the population into appropriate categories.

For example, we might use inmates housed in U.S. jails as the working population to study jail rehabilitation efforts. One method of sample selection could be to use stratified cluster sampling. The first step would be to create a list containing the names of all jails in the United States. The second step would be to categorize these agencies according to some criteria; for instance, four regional categories could be used: North, South, East, and West. Now we could sample equally from each category using a simple random selection process.

Alternatively, we could determine the proportion of jails in each category and randomly draw a sample on the basis of those proportions. For instance, suppose that the North category contained 138 jails, the East 77, the South 175, and the West 160. Calculating the proportion for each category and rounding appropriately, the four categories would represent the following proportions, respectively:

| Category | Number | Proportion (%) |
|---|---|---|
| North | 138 | 25.1 |
| East | 77 | 14.0 |
| South | 175 | 31.8 |
| West | 160 | 29.1 |

Now assume that the time and budget allow us to have a sample of only 100 prisons and jails. Using appropriate rounding techniques, we would produce a sample of 100 jails as follows:

| Category | Number of jails |
|---|---|
| North | 25 |
| East | 14 |
| South | 32 |
| West | 29 |
| Total | 100 jails in sample |

### Sampling Error

Whenever we use probability samples, it is possible that the elements we include in a particular sample may produce findings identical to those of another sample drawn from the same population. This phenomenon, referred to as sampling error, arises because samples often vary slightly, even when two samples from the same population are drawn at the same time and under the same conditions.

For example, suppose we have a population of district attorneys from which to select a random sample for a questionnaire about the number of hours spent preparing for trial per case. It is possible that the mean hours spent in trial preparation are 3.5 hours. Yet even with repeated selection of different random samples, the mean of the sample may never equal exactly 3.5. The sample mean may be higher or lower than the population mean. However, if we select a number of different samples from the population and average the means of the samples, then the average mean should begin to approximate more closely the population's mean hours of trial preparation: 3.5.

It is also important to note that larger samples are more likely to offer mean scores that closely approximate the population means, since larger samples more closely represent the population.

### Sample Size

Some researchers go by the general rule "More is better." Thus, the larger the sample, the better the results. However, in deciding how large a sample is sufficient, we cannot just say, "The larger, the better." To do so would be similar to answering the question "what time is it?" by saying "late."

Determining sample size depends on a number of different factors. First, size can be determined on the basis of how closely the sample approximates the population from which it is drawn. If the population is fairly homogeneous (e.g., all drug offenders in a given region), the sample can be smaller if the population is heterogeneous (e.g., all adults under correctional supervision in a given region). Considering this factor will ensure that the various characteristics in the heterogeneous population are represented in the sample.

A second useful guideline suggests that when statistics will be used, the sample should contain a minimum of 150 subjects. For greater statistical reliability, 250, 500, 1,000, or even 1,500 subjects should be used. As we increase the number of subjects, we also increase the degree to which the sample approximates the population and the accuracy of statistical procedures used in the analysis. Beyond 1,500 subjects, the amount of improved statistical accuracy is rather small.

The number of subjects actually included in a sample is often determined by factors of cost and time. The more subjects included, the greater the cost and time required both to collect and analyze data. When time and money are not an issue, most researchers seek as large a sample as possible, frequently exceeding 1,500 subjects.

## NONPROBABILITY SAMPLING

Nonprobability samples usually find their way into studies where probability samples would be extremely expensive or when precise representativeness of the sample is not crucial. There are also many occasions when a full population cannot be completely defined. For example, Glassner and Berg (1980) sought to examine drinking patterns among American Jews. Since no complete list of Jews existed from which to draw a random sample, Glassner and Berg created a "master list" of Jews residing in one northeastern community. This list was quite comprehensive and was composed of a number of smaller lists obtained from various Jewish organizations and

synagogues in the area. When complete, this list contained the names of over 3,500 Jewish families. Although Glassner and Berg used rigorous systematic sampling strategies, including use of a random numbers table to locate the *n*th name for each selection on the list, their overall sampling strategy was nonetheless a nonprobability strategy.

Nonprobability sampling strategies include a number of different protocols, including convenience, or accidental samples, purpose samples, snowballing techniques, and quota sampling.

### Convenience Samples

Convenience, or accidental, samples are typically composed of subjects who are close at hand or easily accessible. For instance, it is fairly common for college and university professors to use students in their classes as subjects in survey research. This type of sample is attractive to some researchers because it tends to be inexpensive and easy to obtain. Hence, the researcher trades some degree of accuracy for increased efficiency.

Under certain circumstances, this strategy is an excellent means of obtaining preliminary information about some research question quickly and inexpensively. For example, if a researcher wanted to know about college drinking patterns, he or she could justify using a convenience sample or college students. If, however, the researcher was interested in knowing about drinking patterns among parolees, he or she could not use the college student sample and ask them to pretend that they are parolees when answering the questions. In other words, convenience samples must still be evaluated for appropriateness of fit for a study.

Another variation of the convenience sample is the *haphazard* sample, in which inhabitants of an area of investigation are surveyed or interviewed by virtue of their presence. This type of sample is common in some field research studies.

### Purposive Samples

Sometimes when a researcher identifies a sample, his or her intention is to ensure that certain characteristics are represented. This is usually accomplished on the basis of a judgment or certain available information that the researcher possesses about some population or group. In some instances, *purpose samples* are selected after field investigation has ensured the location of people displaying attributes desirable for the study.

For example, if we were interested in studying car theft by adolescents involved in drug and alcohol use, it would be nearly impossible to select a random sample. After conducting a field study, however, we might be able to identify a cluster of youths who are involved in drugs and alcohol and who also steal or have stolen cars. Again, what the researcher may lose in generalizability, he or she will gain in accuracy of information by ensuring that the appropriate subjects have been obtained for the study.

### Snowballing Techniques

In some situations, the use of *snowballing techniques* may be the best way to locate subjects with certain attributes or characteristics necessary in a study. The basic strategy involves first identifying several persons with relevant characteristics and interviewing or administering the survey to them; these subjects are then asked for the names of other persons who possess the same attributes they do.

For example, suppose we are interested in examining drug use or theft by nurses. By using a probability sampling strategy, we might identify few or no subjects (i.e., nurses who use or steal drugs). But through the use of informants, field investigations, or other strategies, we might identify a small number of nurses with these characteristics. By asking these subjects for referrals of additional nurses, the sample eventually "snowballs" from few subjects to many subjects.

### Quota Samples

A *quota sampling* strategy is similar, in some ways, to a *stratified random sample.* Stratified random samples rely on various strategies of chance to fill variable cells, or stratum. The quota sample uses a nonprobability method or filling stratum in a sample in approximately the same proportions as in the full population.

For instance, we might be interested in studying fear of crime among people in the United States, with a special interest in fear among people who are aged. Since census data would give

us reasonable estimates of the aged, young adult, and child populations in the United States, we could determine the proportions of people in these age groups. Next, we could select a region of the country and sample people in these three categories, or age cohorts, in the same proportions as represented in the census data. Quota samples work best with highly objective variables, such as age or socioeconomic status, rather than subjective variables, such as viewpoints or perceptions.

## CAUSALITY

In quantitative research, one of the ultimate goals is the identification of a *cause.* In the so-called hard sciences, it is possible to control all the variables of an experiment and thus to prove causality with reasonable certainty. But in the social sciences, in the strictest sense, it is not possible to prove causality with certainty, given the complexities of social life and social reality. The social sciences typically use humans as subjects of study. Because human behavior is not absolutely predictable, it becomes impossible to predict accurately how, why, or when humans may act in certain ways. Also, because of ethical considerations, it is not appropriate to control or deceive subjects, endanger or harm them, or expose them to risk.

From a less strict perspective, causality cannot be established with certainty mathematically. For example, even though we may have thrown an apple into the air and watched it fall to the ground 99 times, we cannot be certain that the next time we toss the apple, it will fall to the ground. Perhaps a large bird might be lurking in the tree, watching hungrily as the apple goes up and down. The bird might swoop down and intercept the apple on the 100th toss. Or maybe the apple will be caught by an updraft, blown into the tree, and caught among the limbs, such that it will be unable to fall to the ground. Regardless of why the apple might not return to the ground, we cannot say for certain that it will.

Consider several more examples. If we flip a coin 99 times and get heads each time, there is no guarantee that the next time we flip the coin, it will come up heads. In fact, the laws of probability would suggest that it is more likely that the next toss will come up tails. Probability provides a predetermined degree of likelihood that something will happen; it does not provide certainty. At the racetrack, even if a horse has come in first during its last 15 races, we cannot be sure that, in race number 16, the horse will win. On the other hand, if we know that a horse has won its last 15 races, we will be more likely to bet on that horse than on a horse that has lost its last 15 races.

So it is with causality and probability. If we observe that the occurrence of a particular variable, *X*, is regularly followed by the occurrence of another variable, *Y*, it may be reasonable to assume that *X* causes *Y*. However, three conditions must be met in order to accept a causal statement:

1. ***Temporal requirement***—Variable *X* must precede variable *Y* in time.
2. ***Covariance requirement***—For every change that occurs in variable *X*, a subsequent change must occur in variable *Y.* In other words, if variable *X* increases, then variable *Y* must either increase or decrease. Thus, *Y* is dependent on *X*.
3. ***Elimination of alternative explanation requirement (spuriousness)***—The possibility must be eliminated that other factors actually cause variable *Y.* (In the social sciences, this is probably the most difficult requirement to meet.)

When these three conditions have been met, we generally accept that a cause-and-effect relationship exists between the two variables. In such a relationship, the *X* variable is identified as the *independent* variable and the *Y* variable as the *dependent* variable.

In the social sciences, not all relationships can be positively identified as causal. Certain variables that seem to occur at approximately the same time are said to be *concomitant.* Concomitance provides for plural explanations because it suggests that variables occur at approximately the same time as opposed to one variable causing the other. For example, many people eat lunch at approximately noon. We can ask, however, whether hunger occurs at noon or whether lunchtime has become ritualized at that hour. If lunchtime has become ritualized, then does the upcoming noon hour possibly trigger pans of hunger?

Therefore, in the social sciences, we traditionally talk about relationships and their strengths. In a causal relationship, we can statistically measure the strength of the relationship and the probability that it is significant.

## VALIDITY AND RELIABILITY

*Validity* and *reliability* are two important considerations in research. Generally, it is believed that considerations of validity should precede considerations of reliability because validity examines the instrument of measurement while reliability addresses the consistency of response. Validity asks the question: Does the measurement instrument accurately measure the concept it is intended to measure? Reliability, on the other hand, considers the regularity of particular responses given by subjects. Consequently, if an instrument is reliable, it will provide fairly uniform and stable measures of responses, even when the same questions are asked in repeated studies. (This assumes that the questions have already been assessed as being valid.)

### Types of Validity

Researchers can assess a wide variety of types of validity. In this section, we will highlight a few of the most common types, including *face, content, construct, predictive,* and *practical* validity.

**FACE** Face validity addresses whether a specific question appears, on the surface (i.e., "on the face of it"), to measure what the researchers intended. For example, suppose an exam is given to students in an introductory anthropology class. For previous exams in this class, the result has been a normal distribution of grades of a standard scale. In other words, the majority of the students passed the exam with various levels of success. This time, however, a majority of the students fail the exam. As students discuss the exam with the instructor in class, they discover a heading on the test that indicated it was really intended for an upper-level anthropology class. Somehow, the exams were switched. Therefore, this exam lacked face validity for the introductory class because it was not designed for them.

**CONTENT** Content validity assesses whether each item of the measurement instrument accurately measures the concept it was intended to measure. On a history test, for instance, suppose that a student answered questions 9 and 12 incorrectly and questions 14 and 17 correctly. When the exam is reviewed in class, he discovers that everyone else in the class got the same two questions wrong and the same two questions right. He also notices that all four questions relate to a topic that the instructor did not discuss in class and that was not covered in the assigned reading material. Naturally, none of the students has any concern about questions 14 and 17, since everyone got them right. But the students are concerned about the two questions they got wrong, numbers 9 and 12. The class points out to the instructor that these questions are not appropriate since they measure content not covered by lecture or reading material. In fact, the two questions that everyone answered *correctly* also lack content validity because they relate to the same subject material.

**CONSTRUCT** Construct validity is one of the most difficult types of validity to assess because it is basically theoretical in nature. Construct validity is concerned with whether individual questions actually measure the specific concept under study. It is also concerned with whether a set of questions that is used to create a scale assesses the full range of behaviors or responses that are intended to be assessed.

For example, suppose we are interested in assessing degree of liberalism. In compiling a set of questions designed for this purpose, we would need to include questions pertaining to all degrees or level of the characteristics. For instance, if we wanted to assess how the subject feels about minority groups, we could design a set of questions about how geographically close he or she would want minorities to reside. The first questions could ask, "Would it be acceptable to have minorities live in the same country with you?" The second question could ask about having minorities live in the same state, the same city, and so on, until the final question would ask about having minorities live next door. To be sure of the construct validity of this set of questions, we could submit the set to a panel of experts to review inclusiveness and determine whether geographic proximity of minorities is a reasonable measure of liberalism.

**PREDICTIVE AND PRACTICAL** Predictive validity addresses the accuracy of an instrument of measurement using checks outside the instrument itself. For example, most graduate schools rely on Graduate Record Examination (GRE) scores for admission and financial aid distributions decisions, expecting that candidates with high GRE scores will be successful, as measured by completing the graduate program. Thus, someone with a score of 1,400 out of 1,600 on the GRE is presumed to have a greater likelihood of completion than someone with a 1,000 score. Yet GRE

scores lack predictive validity to the extent that many students with scores in the 1,000 range complete their graduate studies while not all those in the 1,400 range do. Therefore, records of successful completion rates constitute the test of predictive ability of the GRE.

Practical validity similarly checks validity outside the instrument. In this case, the researcher examines real-world situations being measured by the instrument and considers how well the results fit reality. For example, a research instrument may suggest that murderers tend to have red hair and wear size-14 shoes. If we were to examine the hair color and shoe size of a population of murderers, perhaps located in several different prisons, we could determine how much practical validity this suggestion has. If the population of murderers indeed has red hair and wears size-14 shoes, then the instrument has a high degree of practical validity. Conversely, if the population of murderers is generally blond and wears size-8 shoes, then the instrument has very low practical validity.

## References

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# Exercise 5.1 Monitoring the Future:

## NATIONAL RESULTS ON ADOLESCENT DRUG USE

**Overview of Key Findings, 2007**

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## INTRODUCTION

Monitoring the Future (MTF) is a long-term study of American adolescents, college students, and adults through age 45. The study, ongoing on an annual basis since its inception in 1975, is conducted by the University of Michigan's Institute for Social Research and is supported under a series of investigator initiated, competing research grants from the National Institute on Drug Abuse.

The need for a study such as MTF is evident. Substance use by American young people has proven to be a rapidly changing phenomenon, requiring frequent assessments and reassessments. Since the mid-1960s, when illicit drug use burgeoned in the normal youth population, it has remained a major concern for the nation. Smoking, drinking, and illicit drug use are leading causes of morbidity and mortality, both during adolescence as well as later in life. How vigorously the nation responds to teenage substance use, how accurately it identifies the substance abuse problems that are emerging, and how well it comes to understand the effectiveness of the many policy and intervention efforts largely depend on the ongoing collection of valid and reliable data. Monitoring the Future is designed to generate such data in order to provide an accurate picture of what is happening in this domain and why. It has served that function well for the past 32 years.

The 2007 MTF survey encompassed nearly 50,000 eighth-, 10th-, and 12th-grade students in over 400 secondary schools nationwide. The first published results are presented in this report. Recent trends in the use of licit and illicit drugs are emphasized, as well as trends in the levels of perceived risk and personal disapproval associated with each drug. This study has shown these beliefs and attitudes to be particularly important in explaining trends in use. In addition, trends in the perceived availability of each drug are presented.

A synopsis of the design and methods used in the study and an overview of the key results from the 2007 survey follow this introductory section. Next is a section for each individual drug class, providing figures that show trends in the overall proportions of students at each grade level (a) using the drug, (b) seeing a "great risk" associated with its use, (c) disapproving of its use, and (d) saying that they think they could get it "fairly easily" or "very easily" if they wanted to. The years for which data on each grade are available are 1975–2007 for 12th graders and 1991–2007 for 8th and 10th graders, who were first included in the study in 1991.

## STUDY DESIGN AND METHODS

At the core of Monitoring the Future is a series of large, annual surveys of nationally representative samples of public and private secondary school students throughout the coterminous United States. Every year since 1975, a national sample of 12th graders has been surveyed. Beginning in 1991, the study was expanded to include comparable, independent national samples of 8th graders and 10th graders each year. The year 2007 marked the 33rd survey of 12th graders and the 17th survey of 8th and 10th graders.

### Sample Sizes

The 2007 sample sizes were about 16,500, 16,400, and 15,100 in 8th, 10th, and 12th grades, respectively. In all, about 48,000 students in 403 secondary schools participated. Because multiple questionnaire forms are administered at each grade level, and because not all questions are contained in all forms, the number of

cases upon which a particular statistic is based may be less than the total sample size. The tables here contain notes on the number of forms used for each statistic if less than the total sample is used.

### Field Procedures

University of Michigan staff members administer the questionnaires to students, usually in their classrooms during a regular class period. Participation is voluntary. Parents are notified well in advance of the survey administration and are provided the opportunity to decline their son's or daughter's participation. Questionnaires are self-completed and formatted for optical scanning.

In 8th and 10th grades, the questionnaires are completely anonymous, and in 12th grade, they are confidential (to permit the longitudinal follow-up surveys of random subsamples of participants for some years after high school). Extensive, carefully designed procedures are followed to protect the confidentiality of subjects and their data. All procedures are reviewed and approved on an annual basis by the University of Michigan's Institutional Review Board (IRB) for compliance with federal guidelines for the treatment of human subjects.

### Measures

A standard set of three questions is used to determine *usage* levels for the various drugs (except for cigarettes and smokeless tobacco). For example, we ask, "On how many occasions (if any) have you used marijuana...(a) in your lifetime? (b) during the past 12 months? (c) during the last 30 days?" Each of the three questions is answered on the same answer scale: 0, 1–2, 3–5, 6–9, 10–19, 20–39, and 40 or more occasions.

For the psychotherapeutic drugs (amphetamines, sedatives [barbiturates], tranquilizers, and narcotics other than heroin), respondents are instructed to include only use ". . . on your own—that is, without a doctor telling you to take them." A similar qualification is used in the question on use of anabolic steroids.

For cigarettes, respondents are asked two questions about use. First they are asked, "Have you ever smoked cigarettes?" (the answer categories are "never," "once or twice," and so on). The second question asks, "How frequently have you smoked cigarettes during the past 30 days?" (the answer categories are "not at all," "less than one cigarette per day," "one to five cigarettes per day," "about one-half pack per day," etc.). Smokeless tobacco questions parallel those for cigarettes.

Alcohol use is measured using the three questions illustrated above for marijuana. A parallel set of three questions asks about the frequency of being drunk. A different question asks, for the prior two-week period, "How many times have you had five or more drinks in a row?"

*Perceived risk* is measured by a question asking, "How much do you think people risk harming themselves (physically or in other ways), if they . . ." "try marijuana once or twice," for example. The answer categories are "no risk," "slight risk," "moderate risk," "great risk," and "can't say, drug unfamiliar."

*Disapproval* is measured by the question "Do YOU disapprove of people doing each of the following?" followed by "trying marijuana once or twice," for example. Answer categories are "don't disapprove," "disapprove," and "strongly disapprove." In the 8th- and 10th-grade questionnaires only, a fourth category, "can't say, drug unfamiliar," is provided and is included in the calculations.

*Perceived availability* is measured by the question "How difficult do you think it would be for you to get each of the following types of drugs, if you wanted some?" Answer categories are "probably impossible," "very difficult," "fairly difficult," "fairly easy," and "very easy." For 8th and 10th graders only, the additional answer category, "can't say, drug unfamiliar," is offered and included in the calculations.

## OVERVIEW OF KEY FINDINGS

In recent years, the trends in drug use have become more complex and thus more difficult to describe. A major reason for this increased complexity is that cohort effects have emerged, beginning with the increases in drug use that occurred during the early 1990s. "Cohort effects" refer to lasting differences between class cohorts that stay with them as they advance through school and beyond. These effects result in the various grades reaching peaks or valleys in different years, and thus the various age groups are sometimes moving in different directions at a given point in history. We have seen such cohort effects for cigarette smoking throughout most of the life of the study, but such effects were much less apparent for the illicit drugs until the past decade and a half. The 8th graders have been the first to show turnarounds in illicit drug use: They were the first to show the upturn in use in the early 1990s and the first to show the decline in use after 1996. They have generally shown the greatest proportional declines from recent peak levels of use, attained for the most part during the 1990s, while the proportional declines have generally been the least at 12th grade.

A number of drugs showed modest continuing declines in use in 2007, although few of the one-year changes reached statistical significance. These included marijuana and all of the stimulant drugs other than cocaine. Most of the other drugs held steady in their use in 2007, generally following decreases in their use in prior years. Only one of the many classes of drugs under study showed any sign of increase in use this year—ecstasy (MDMA).

## Drugs Decreasing in Use

The use of ***any illicit drug*** in the 12 months preceding the survey (annual prevalence) is down by more than four tenths among 8th graders since the recent peak for that grade in 1996. Tenth and 12th graders reached their recent peaks a year later than the 8th graders; from their 1997 peaks, use is down by about a quarter among 10th graders, but by only about 15% so far among 12th graders. In the one-year interval from 2006 to 2007, only the 8th-grade level had a statistically significant decline in any prevalence period in this index (specifically, in lifetime and annual prevalence); nevertheless, gradual declines did continue in all grades, with 8th-grade lifetime use showing the largest decline of 1.9 percentage points to 19%. In 2007, the lifetime prevalence rates for this index were 19%, 36%, and 47% in grades 8, 10, and 12, respectively. In other words, just under half of American secondary school students today have tried an illicit drug by the time they near high school graduation.

A number of specific drug classes showed continuing declines this year in at least one grade. These include ***marijuana***, ***amphetamines***, ***Ritalin*** specifically, ***methamphetamine***, and ***crystal methamphetamine***. (Alcohol and cigarettes, discussed in a separate section below, also showed some significant declines.)

***Marijuana*** use tends to drive the overall illicit drug index because it is by far the most prevalent of the illicit drugs. Therefore, marijuana shows a very similar pattern of change to that for any illicit drug. In 2007, the annual prevalence of marijuana use fell by a significant 1.4 percentage points among 8th graders to 10.3%, and by a nonsignificant 0.6 percentage points among 10th graders to 24.6%. Annual marijuana use among 12th graders leveled at 31.7%.

***Amphetamine*** use is well below recent peak levels in all three grades under study. Eighth and 10th graders reached their peak levels in annual prevalence in 1996 and since then have shown declines of more than one half and one third, respectively. Twelfth graders, on the other hand, did not reach their recent peak level until 2002, and have declined by one third since then. The decline in use has decelerated at 8th grade since 2004, though there was a nonsignificant 0.5-percentage-point drop this year; at 10th grade, use stabilized after 2005. Twelfth graders have continued to show a gradual decline in recent years (down 0.6 percentage points in 2007, nonsignificant), once again suggesting that a cohort effect is at work.

***Ritalin*** is a specific prescription amphetamine. Its use outside of medical supervision was first measured in the study in 2001; use has been falling since then, with total declines of between one quarter and one half at each grade level. In 2007, 2.1% (8th grade), 2.8% (10th grade), and 3.8% (12th grade) report having used Ritalin without medical instruction at least once in the prior 12 months.

***Methamphetamine*** use was not included in the study until 1999. Since then it has shown a rather steady decline in all three grades—a decline that has now reached about two-thirds in all three grades. That decline continued in 2007, significantly so in both 8th and 12th grades.

***Crystal methamphetamine*** (***ice***) reached its lowest point this year since 1992. Its use is measured only among 12th graders; their annual prevalence this year is 1.6%, down by about half from the peak year of 2002.

## Drugs Holding Steady

Among the many drugs showing very little change in 2007 at any grade level were ***LSD***, ***hallucinogens other than LSD***, ***cocaine***, ***crack cocaine***, ***heroin***, ***narcotics other than heroin***, ***OxyContin*** and ***Vicodin*** specifically, ***sedatives***, ***tranquilizers***, three so-called "club drugs" (***Ketamine***, ***Rohypnol***, and ***GHB***), and ***steroids***. In each case, annual prevalence rates are below where they were at their recent peaks, but no appreciable further decline occurred at any grade level for these drugs in 2007. ***LSD*** use—which had shown very sharp declines in annual prevalence between 1999 and 2004, accompanied by a sharp decline in the perceived availability of the drug—has shown little further decline at any grade level. Annual prevalence rates are now very low—at 1.1% in grade 8, 1.9% in grade 10, and 2.1% in grade 12. During the period of decline, perceived risk and disapproval of LSD use did not change in ways that would have been expected if they were driving the change in use (that is, they did not increase); on the other hand, perceived availability did change in the expected direction, showing a sharp decline.

***Hallucinogens other than LSD***, taken as a class, show much less decline in recent years than LSD; but they are still somewhat below their recent peak levels. (Psilocybin, also known as "shrooms" or "magic mushrooms," is the most widely used of these drugs today.) Annual use changed very little in 2007. Annual prevalence ranges from 1.6% in 8th grade to 4.8% in 12th grade.

The one stimulant drug that did not show a decline this year was ***cocaine***. Cocaine use reached a recent peak among teens in the late 1990s, declined for a year or two, and has held relatively level in recent years. Today, annual prevalence ranges between 2% and 5% in grades 8, 10, and 12.

***Crack cocaine*** use previously declined some in all three grades but showed no further decline this year. Annual prevalence now ranges between 1.3% and 1.9% across the three grades; these rates are down by between a quarter and one half from what they were at their recent peaks.

***Heroin*** use finally fell below its recent peak levels in all three grades by 2001. Since then use has held quite steady. Annual prevalence of heroin use is now slightly below 1.0% in all three grades.

***Narcotics other than heroin***, taken as a class, are reported only for 12th graders. After increasing substantially since the early 1990s, use of this class of drugs has appeared to level over the past few years. Still, the annual prevalence rate stands at 9.2%. Vicodin and OxyContin, two important analgesics in the narcotic drugs class, are discussed below.

***OxyContin*** use was first measured in 2002. The 2007 figures for all three grades are slightly higher than they were in 2002, but the trend lines have been somewhat erratic. For the three grades combined, there was no change in annual prevalence in the past year. Annual prevalence rates in 2007 for OxyContin use are 1.8%, 3.9%, and 5.3%. In other words, 1 in every 20 high school seniors has at least tried this powerful narcotic drug in the past year.

Similarly, ***Vicodin*** use shows no systematic change in use this year, and the observed rates remain close to recent peak levels. Annual prevalence rates in 2007 are higher than they are for OxyContin: 2.7%, 7.2%, and 9.6% in 8th, 10th, and 12th grades, respectively.

***Sedative (barbiturate)*** use, which is reported only for 12th grade, did not reach its recent peak until 2005, when annual prevalence reached 7.2%. It is down slightly to 6.2% in 2007.

***Tranquilizer*** use increased steadily for nearly a decade, from 1992 to about 2000 among 10th and 12th graders (and from 1991 through 1996 among 8th graders). Thereafter it declined, but this year there was no further decline. Thus, the decade-long upward march in tranquilizer use in the upper grades ended, some modest downward trending occurred, and now that decline seems to be over. Use among 8th graders, which has been much lower, started declining after 1996 and has changed very little since 1998. Annual prevalence rates now lie between 2.4% in grade 8 and 6.2% in grade 12—only modestly below their recent peak levels.

Three "club drugs"—***Ketamine***, ***Rohypnol***, and ***GHB***—have all had quite low prevalence rates in recent years and showed some declines. In 2007, however, there was little systematic change in annual prevalence for any of these three drugs.

***Anabolic steroid*** use reached peak levels by 2000 in 8th and 10th grades, and by 2002 in 12th grade. Since those peak levels, annual prevalence has declined by one half in the lower grades and over four tenths in 12th grade; those declines began in 2001 among 8th graders, in 2003 among 10th graders, and not until 2005 among 12th graders. In 2006 and 2007, steroid use remained relatively unchanged. The annual prevalence figures in 2007 were 0.8%, 1.1%, and 1.4% in grades 8, 10, and 12, respectively.

## Drugs Showing Signs of Increased Use

Only one drug showed signs of increased use this year—***ecstasy (MDMA)***—and the increase was modest and not significant. Another drug, ***inhalants***, provided mixed signals, so we discuss it in this section.

***Ecstasy (MDMA)*** use declined substantially at all three grade levels after 2001, apparently as a result of a considerable rise in perceived risk of using this drug. However, while some further decrease occurred in 2006 in 8th grade, there was a nearly significant increase of 1.1 percentage points at 12th grade (to 4.1%), and annual prevalence at 10th grade had been increasing a bit over the prior two years. In 2007 there was some further increase in use at 10th and 12th grades, and the prior gradual decline at 8th grade ended. Of perhaps more concern, perceived risk and disapproval of ecstasy use have been declining in the two lower grades over the past three years, and perceived risk at 12th grade leveled in 2006 and declined in 2007. In 2007 all three grades showed some decline in perceived risk and disapproval. Given that changes in these important attitudes and beliefs are often leading indicators of changes to come in actual use, there is the concern that newer arrivals to adolescence do not have an appreciation of the dangers of using this drug and will be more likely to initiate use as a result.

***Inhalants*** constitute another class of drug, which has shown a worrisome decline in perceived risk, and it exhibited a mixed pattern of change this year. After 1995, inhalant use had been declining at all three grades. Then in 2003 we reported a significant increase in inhalant use among the 8th graders, and in 2004 all grades showed some increase in annual prevalence, though none was statistically significant. In 2005, there occurred some further increase in grade 12. This pattern of increase may have reflected a cohort effect working its way up the age spectrum, as we have seen for several other drugs. In 2006 and 2007 the pattern of changes has been mixed, with the increase in use continuing at 10th grade, but with some decline occurring at 8th and 12th grades. Of particular concern for the future, however, is the fact that among the 8th and 10th graders, perceived risk had been falling steadily for five years, after peaking in 2001. In 2007, that decline halted in 8th grade but continued at 10th. (Twelfth graders are not asked about the risks of inhalant use.) We believe that this recent trend may reflect generational forgetting (discussed below) of the dangers of this drug, as newer cohorts replace the older ones who had been exposed to the anti-inhalant ads in the middle 1990s, leaving the newer cohorts vulnerable to a resurgence of use.

## Over-the-Counter Cough and Cold Medicines

In response to a possible emergent trend, a new question was included in the study for the first time in 2006 about the use of over-the-counter cough and cold medicines for the purpose of "getting high." The drugs in these classes that are abused usually contain dextromethorphan, a cough suppressant that can cause

alterations of consciousness and mood when taken in high doses. Street names for these drugs include "DXM," "Dex," and "skittles." The proportions of students reporting having used these drugs during the prior year for the purpose of getting high were 4%, 5%, and 7% in grades 8, 10, and 12, respectively, in 2006. These rates remained the same in 2007, with the exception that use at 12th grade declined by one percentage point; so at this point this problem behavior does not seem to be increasing further. Because these drugs are available over the counter, students may not fully recognize the dangers of using them, even in high doses. Perceived risk is not assessed, but we believe it is possible that the increasing attention to these drugs and their dangers, particularly by the media over the past few years, may have succeeded in stemming the growth in their use.

### Implications for Prevention

The wide divergence in historical trajectories of the various drugs over time helps to illustrate the point that, to a considerable degree, the determinants of use are often specific to the drugs. These determinants include both the perceived benefits and the perceived risks that young people come to associate with each drug. Unfortunately, word of the supposed benefits of using a drug usually spreads much faster than information about the adverse consequences. The former—supposed benefits—takes only rumor and a few testimonials, the spread of which has been hastened greatly by the media and the Internet. It usually takes much longer for the evidence of adverse consequences (e.g., death, disease, overdose reactions, addictive potential) to cumulate and then be disseminated. Thus, when a new drug comes onto the scene, it has a considerable "grace period" during which its benefits are alleged and its consequences are not yet known. We believe that ecstasy was the most recent beneficiary of such a grace period, which lasted until 2001, when perceived risk for this drug finally began to rise sharply. To a considerable degree, prevention must occur drug by drug, because people will not necessarily generalize the adverse consequences of one drug to the use of other drugs. Many beliefs and attitudes held by young people are specific to the drug. The figures in this *Overview* on perceived risk and disapproval for the various drugs—attitudes and beliefs that we have shown to be important in explaining many drug trends over the years—amply illustrate this assertion. These attitudes and beliefs are at quite different levels for the various drugs and, more importantly, often trend differently over time.

### "Generational Forgetting" Helps Keep the Epidemic Going

Another point worth keeping in mind is that there tends to be a continuous flow of new drugs onto the scene and of older ones being "rediscovered" by young people. Many drugs have made a comeback years after they first fell from popularity, often because young people's knowledge of their adverse consequences faded as generational replacement took place. We call this process "generational forgetting." Examples include LSD and methamphetamine, two drugs used widely in the beginning of the broad epidemic of illicit drug use, which originated in the 1960s. Heroin, cocaine, PCP, and crack are some others that made a comeback in the 1990s after their initial popularity faded. At present we see a danger that LSD and ecstasy may be about to exhibit the effects of generational forgetting of their potential for adverse consequences.

As for newer drugs emerging, examples include the nitrite inhalants and PCP in the 1970s; crack and crystal methamphetamine in the 1980s; and Rohypnol, GHB, and ecstasy in the 1990s. The perpetual introduction of new drugs (or of new forms or new modes of administration of older ones, as illustrated by crack, crystal methamphetamine, and noninjected heroin) helps to keep the country's "drug problem" alive. Because of the lag times described previously, during which evidence of adverse consequences must cumulate and be disseminated before they begin to deter use, the forces of containment are always playing "catch up" with the forces of encouragement and exploitation. Organized efforts to reduce the "grace period" experienced by new drugs would seem among the most promising responses for minimizing the damage they will cause. Such efforts regarding ecstasy by the National Institute on Drug Abuse and others appeared to pay off.

The psychotherapeutic drugs now make up a larger part of the overall drug picture than was true 10 years ago, in part because use has increased for many of them over that period, and in part because use of a number of street drugs has declined substantially since the mid-1990s. It seems likely that young people are less concerned about the dangers of using these drugs outside of medical regimen than they are about the dangers of using the illegal drugs, quite likely because the former are widely used for legitimate medical purposes. Increasingly, prescription psychotherapeutic drugs are being advertised directly to the consumer, which also may imply that they can be used with low risk.

### Cigarettes and Alcohol

The statistics for use of the licit drugs—cigarettes and alcohol—are also a basis for considerable concern. Nearly half (46%) of American young people have tried cigarettes by 12th grade, and nearly a quarter (22%) of 12th graders are current smokers. Even as early as 8th grade, nearly a quarter (22%) have tried cigarettes, and 1 in 14 (7.1%) has already become a current smoker. Fortunately, there has been some real improvement in these smoking statistics over the last 10 or 11 years, following a dramatic increase earlier

in the 1990s. Much of the recent improvement was simply regaining the ground lost in the early 1990s, but by 2007 that has been more than accomplished.

Thirty-day prevalence of ***cigarette*** use reached its recent peak in 1996 at grades 8 and 10, capping a rapid climb from the 1991 levels (when data were first gathered on these grades). In the decade between 1996 and 2007, current smoking has fallen considerably in these grades (by 66% and 54%, respectively). For 12th graders, peak use occurred a year later, in 1997, and has had a more modest decline so far of 41% by 2007. However, because of the strong cohort effect that we have consistently observed for cigarette smoking, we expect the 12th graders to continue to show declines, as the lighter-using cohorts of 8th and 10th graders become 12th graders. Overall increases in perceived risk and disapproval of smoking appear to have contributed to this downturn. Perceived risk increased substantially and fairly steadily in all grades from 1995 through 2004, after which it leveled in 8th and 10th grades, but continued rising in 12th until 2006, after which it leveled. Disapproval of smoking had been rising steadily in all grades since 1996. After 2004, the rise decelerated in the lower grades through 2006—again, reflecting a cohort effect in this attitude.

It seems likely that some of the attitudinal change that has occurred for cigarettes is attributable to the adverse publicity suffered by the tobacco industry in the 1990s, as well as a reduction in cigarette advertising and an increase in antismoking advertising reaching children. But price is also likely to have been an important factor; cigarette prices rose appreciably in the late 1990s and early 2000s as cigarette companies tried to cover the costs of the tobacco settlement, and as states increased excise taxes on cigarettes.

Unfortunately, the declines in smoking in all grades have decelerated considerably, and current daily use showed no further decline in 2007 in the two upper grades. Very likely a slowdown in price increases, as well as declines in the funding of antismoking campaigns at both the national and state levels, have contributed to these developments. In 2007 use among 8th graders decreased significantly, use among 10th graders dropped very slightly, and use by 12th graders leveled. We believe it likely that the larger proportional declines in the lower grades will make their way into the upper grades as the cohort effect makes its way up the age spectrum.

***Smokeless tobacco*** use had also been in decline in recent years, continuing into the early 2000s, but the decline appears to have ended for the upper grades. The 30-day prevalence rates for smokeless tobacco are now down by about half from their peak levels.

***Alcohol*** use remains extremely widespread among today's teenagers. Nearly three quarters of students (72%) have consumed alcohol (more than just a few sips) by the end of high school; and about two fifths (39%) have done so by 8th grade. In fact, more than half (55%) of the 12th graders and nearly a fifth (18%) of the 8th graders in 2007 report having been drunk at least once in their life.

To a considerable degree, alcohol trends have tended to parallel the trends in illicit drug use. These include a modest increase in binge drinking (defined as having five or more drinks in a row at least once in the past two weeks) in the early and mid-1990s, though it was a proportionally smaller increase than was seen for most of the illicit drugs. Fortunately, binge drinking rates for the nation's teenagers leveled off seven to ten years ago, just about when the illicit drug rates began to turn around, and in 2002 a drop in drinking and drunkenness began to appear in all grades. The decline continued into 2005 for drinking at all grades (as well as for prior month drunkenness among 10th and 12th graders). In 2007, current use of alcohol continued to decline for 12th grade, declined some in 8th grade, and leveled among 10th graders.

The longer-term trend data available for 12th graders show that alcohol usage rates, and binge drinking in particular, are substantially below where they were at the beginning of the 1980s. Most of the improvement occurred during the 1980s, before being partly offset by increases in the first half of the 1990s; fortunately, the recurrence of a downturn in recent years pretty much offset the ground lost in the 1990s.

## Where Are We Now?

Clearly, the problem of substance abuse among American young people continues to remain sufficiently widespread to merit concern. Today, nearly half of them (47%) have tried an illicit drug by the time they finish high school. Indeed, if inhalant use is included in the definition of illicit drug use, nearly a third (28%) have done so as early as 8th grade—when most students are only 13 or 14 years old. More than 1 in 4 (26%) have used some illicit drug other than marijuana by the end of 12th grade, and nearly 1 in 5 (19%) of all 12th graders reported doing so during the 12 months prior to the survey.

Of course, if we look at the situation from the perspective of helping to deter future use, we may want to emphasize the considerable proportions of youth who do not use each of these drugs and who disapprove of their use. For example, 74% of seniors today made it through the end of high school without ever using an illicit drug other than marijuana, and more than half (58%) did so without ever trying marijuana. Further, the great majority personally disapprove of using most of the illicit drugs, as has been true for many years.

### ANY ILLICIT DRUG

Monitoring the Future routinely reports three different indexes of illicit drug use—an index of "any illicit drug" use, an index of the use of "any illicit drug other than marijuana," and an index of the use of "any illicit drug including inhalants." In this section we discuss only the first two; the statistics for all three may be found in the tables.

In order to make comparisons over time, we have kept the definitions of these indexes constant, even though some new substances appear as time passes. The index levels are little affected by the inclusion of these newer substances, however, primarily because most individuals who use these newer substances are also using the more prevalent drugs included in the indexes. The major exception has been inhalants, the use of which is quite prevalent in the lower grades. Thus, after the lower grades were added to the study in 1991, a special index was added that includes inhalants.

### Trends in Use

In the late 20th century, young Americans reached extraordinarily high levels of illicit drug use by U.S. as well as international standards. The trends in lifetime use of any illicit drug are given in the first panel on the facing page. By 1975, when the study began, the majority of young people (55%) had used an illicit drug by the time they left high school. This figure rose to two thirds (66%) by 1981 before a long and gradual decline to 41% by 1992—the low point. After 1992 the proportion rose considerably, reaching a recent high point of 55% in 1999; it stands at 47% in 2007.

Trends for annual, as opposed to lifetime, prevalence appear in the second (upper right) panel. Among 8th graders, a gradual and continuing falloff occurred after 1996. Peak rates since 1991 were reached in 1997 in the two upper grades and declined little for several years. However, since 2001 both upper grades have shown declines, which continued in 2007.

Because marijuana is much more prevalent than any other illicit drug, trends in its use tend to drive the index of any illicit drug use. Thus we have an index that excludes marijuana, and shows the proportions of high school students who use the other, so-called "harder" illicit drugs. The proportions who have used any illicit drug other than marijuana in their lifetime are shown in the third panel (lower left). In 1975, over one third (36%) of 12th graders had tried some illicit drug other than marijuana. This figure rose to 43% by 1981, then declined for a long period to a low of 25% in 1992. Some increase followed in the 1990s as the use of a number of drugs rose steadily, and it reached 30% by 1997. In 2001 it was 31%, but this reflected a slight artifactual upward shift in the estimate due to a change in the question wording for "other hallucinogens" and tranquilizers. Since 1997, the rate has fallen some to 26% in 2007. The fourth panel presents the annual prevalence data for the same index, which shows a pattern of change over the past few years similar to the index of any illicit drug use, but with much less pronounced change since 1991.

Overall, these data reveal that, while use of individual drugs (other than marijuana) may fluctuate widely, the proportion using any of them is much less labile. In other words, the proportion of students prone to using such drugs and willing to cross the normative barriers to such use changes more gradually. The usage rate for each individual drug, on the other hand, reflects many more rapidly changing determinants specific to that drug: how widely its psychoactive potential is recognized, how favorable the reports of its supposed benefits are, how risky the use of it is seen to be, how acceptable it is in the peer group, how accessible it is, and so on.

## SUBGROUP DIFFERENCES

Understanding the important subgroup variations in substance use among the nation's youth allows for more informed considerations of substance use etiology and prevention. In this section, we present a brief overview of some of the major demographic subgroup differences.

Space does not permit a full discussion or documentation of the many subgroup differences on the host of drugs covered in this report. However, the much longer Volume I in this series—including the one published in 2007 and the one forthcoming in 2008—contains an extensive appendix with tables giving the subgroup prevalence levels and trends for all of the classes of drugs discussed here. Chapters 4 and 5 in Volume I also present a more in-depth discussion and interpretation of those subgroup differences. Comparisons are made by gender, college plans, region of the country, community size, socioeconomic level (as measured by the educational level of the parents), and race/ethnicity. Monitoring the Future Occasional Paper 67—to be succeeded by Occasional Paper 69 (forthcoming)—is available on the study's Web site (www.monitoringthefuture.org), and provides in graphic form the many subgroup trends for all drugs. The reader may wish to access the graphic version of this material available in this online occasional paper, because it is so much easier to comprehend the findings with a pictorial display of the subgroup trend data over time than with the tabular material provided in Volume I.

### Gender

Generally, we have found males to have somewhat higher rates of illicit drug use than females (particularly, higher rates of frequent use), and much higher rates of smokeless tobacco and steroid use. Males generally have had higher rates of heavy drinking; however, in their 30-day prevalence of alcohol use at 8th grade, the girls overtook the boys in 2002 and have had higher rates since. At 10th grade, girls overtook boys in 2005 and have remained equivalent since. The genders have had roughly equivalent rates of cigarette smoking (although among 12th graders the two genders have reversed order twice during the life of the study). In 2007, 30-day smoking fell among 8th- and 10th-grade females, resulting in lower rates than among males. The gender differences, in which males end up with higher rates of use, appear to emerge as students grow

older. In 8th grade, females actually have higher rates of use for some drugs. Usage rates for the various substances generally tend to move much in parallel across time for both genders, although the absolute differences tend to be largest in the historical periods in which overall prevalence rates are highest.

### College Plans

While in high school, those students who are *not* college-bound (a decreasing proportion of the total youth population) are considerably more likely to be at risk for using illicit drugs, drinking heavily, and particularly smoking cigarettes. Again, these differences are largest in periods of highest prevalence. In the lower grades, the college-bound showed a greater increase in cigarette smoking in the early to mid-1990s than did their non-college-bound peers.

### Region of the Country

The differences associated with region of the country are sufficiently varied and complex that we cannot do justice to them here. In the past, though, the Northeast and the West tended to have the highest proportions of students using any illicit drug, and the South the lowest (although these rankings do not apply to many of the specific drugs and do not apply to all grades today). In particular, the cocaine epidemic of the early 1980s was much more pronounced in the West and Northeast than in the other two regions, although the differences decreased as the overall epidemic subsided. While the South and West have generally had lower rates of drinking among students than the Northeast and the North Central (Midwest), those differences have narrowed somewhat in recent years. Cigarette smoking rates have consistently been lowest in the West (except in 2004 among 8th graders, when the Northeast was just as low, and in 2007, when the Northeast was the lowest). The upsurge of ecstasy use in 1999 occurred primarily in the Northeast, but that drug's newfound popularity then spread to the three other regions of the country in 2000.

### Population Density

There have not been very large or consistent differences in overall illicit drug use associated with population density over the life of the study, helping to demonstrate just how ubiquitous the illicit drug phenomenon has been in this country. Crack and heroin use generally have not been concentrated in urban areas, as is commonly believed, meaning that no parents should assume that their children are immune to these threats simply because they do not live in a city.

### Socioeconomic Level

The average level of education of the student's parents, as reported by the student, is used as a proxy for socioeconomic status of the family. For many drugs the differences in use by socioeconomic class are very small, and the trends have been highly parallel. One very interesting difference occurred for cocaine, the use of which was *positively* associated with socioeconomic level in the early 1980s. That association had nearly disappeared by 1986, however, with the advent of crack, which offered cocaine at a lower price. Cigarette smoking showed a similar narrowing of class differences, but this time it was a large *negative* association with socioeconomic level that diminished considerably between roughly 1985 and 1993. In more recent years, that negative association has reemerged in the lower grades as use declined faster among students from more educated families. Rates of binge drinking are roughly equivalent across the classes in the upper grades (but not in 8th grade), and this rough equivalence has existed for some time among 12th graders.

### Race/Ethnicity

Among the most dramatic and interesting subgroup differences are those found among the three largest racial/ethnic groups—Whites, African Americans, and Hispanics. Contrary to popular assumption, at all three grade levels African-American students have substantially lower rates of use of most licit and illicit drugs than do Whites. These include any illicit drug use, most of the specific illicit drugs, alcohol, and cigarettes. In fact, African Americans' use of cigarettes is dramatically lower than Whites' use; and this is a difference that emerged largely during the life of the study (i.e., since 1975). Hispanic students have rates of use that tend to fall between the other two groups in 12th grade—usually closer to the rates for Whites than for African Americans. Hispanics do have the highest reported rates of use for some drugs in 12th grade—crack, heroin with and without a needle, methamphetamine, and crystal methamphetamine. In 8th grade, they tend to come out highest of the three racial/ethnic groups on nearly all classes of drugs (amphetamines being the major exception). One possible explanation for this change in ranking between 8th and 12th grade may lie in the considerably higher school dropout rates of Hispanic youth. Thus, more of the "drugprone" segment of that ethnic group may leave school before 12th grade compared to the other two racial/ethnic groups. Another explanation could be that Hispanics are more precocious in their initiation of these types of behaviors. Again, we refer the reader to Occasional Paper 69 (forthcoming) at www.monitoringthefuture.org for a much more complete picture of these complex subgroup differences and how they have changed over the years.

## Application Exercise 5.1

Name of Student:_____

Student ID No.:_____

Course/Section No.:_____

Date:_____

1. "Monitoring the Future" discussed the design, methods, and field procedures for assessing adolescent substance abuse in the United States. Given the information on sampling that was provided, is an appropriate sample size used? Why or why not?

2. Why is a random sample used in this research?

3. What alternate methods could be used to recruit subjects?

4. Is this the most appropriate way to assess adolescent substance use? Justify your answer.

5. How might you be able to *triangulate* the results from the "Monitoring the Future" study?

## Exercise 5.2 Women in Parole:

### Respect and Rapport (Convenience Sampling)

*Connie Ireland, Ph.D., & Bruce Berg, Ph.D.*


### ABSTRACT

While the number of females in law enforcement has increased in recent years, research suggests that the uniquely gendered contributions of females are minimized in favor of traditional modes of law enforcement, emphasizing physical presence, authoritative commands, and demonstrative control. This research examines women in parole, using in-depth interviews with a small convenience sample of female parole agents in California. Subjects discuss their experiences as parole agents from the perspective of women in a predominantly male occupation. Overwhelmingly, subjects emphasize traditionally associated female traits of intuition, verbal communication, and relationships, over physical tactics. Subjects emphasize the importance of building respect and rapport with parolees in multiple contexts, including in the parolees' homes, with the families of parolees, and at parolees' places of employment. Subjects suggest that this approach ensures their personal safety and enhances parolee compliance, especially when compared to their subjective account of experiences by male parole agents.


### INTRODUCTION

With few exceptions, scholarship on females in law enforcement has singularly focused on women in policing. This literature richly details the entrance of women into law enforcement fields and documents the gender myths, legal battles, and prevalent harassment experienced by female police officers (Berg & Budnick, 1986; Martin, 1979). While little research has directly examined these experiences for women in other law enforcement careers, recent research suggests female parole agents report similar harassment, marginalization and gendered adaptations as their policing counterparts (Ireland & Berg, 2006; Palacios & Ireland, 2005).

During the 1980s, research suggested women's performance of their law enforcement duties emphasized stereotypic feminine traits such as verbal communication and problem solving skills in lieu of more stereotypic masculine traits of strength and physical presence. For example, Homant and Kennedy (1985) found that female police officers were frequently more *sympathetic* to victims of spousal abuse than male officers. Van Wormer (1981) found that female police officers frequently used *communication skills* rather than force and accomplished their duties in ways superior to their male counterparts (see also Berg, 1992; Christie, 1999). The current research examines the extent to which this performance orientation is shared by women working as parole agents.

Data for this article are derived from analysis of twelve semi-structured interviews collected for a larger study examining various broad domains of female parole agents in California (see Ireland & Berg, 2006). The current article focuses on gendered performance of duties as perceived by female parole agents, including their perceptions of guns, fear/safety, and modes for ensuring parolee compliance. These gendered experiences are embodied in the grounded themes of, "respect and rapport."

### LITERATURE REVIEW

A thorough search of the literature on parole reveals a void in scholarship on female parole agents. The scant literature on parole in general focuses primarily on changes in prison release mechanisms or supervision of parolees in the field. One journal printed a special edition dedicated to women in corrections, encompassing anecdotal stories and memoirs of early female correctional pioneers but failed to include any mention of female parole agents (Women Working in Corrections, 2005). With rare exception (Ireland & Berg, 2006; Palacios & Ireland, 2005), literature focuses solely on females in policing or corrections/custody positions (see Feinman, 1994; Martin, 1996; Van Wormer & Bartollas, 2000), virtually ignoring females in probation and parole. Many of the issues relevant to females in policing and custody positions—such as hiring/training issues, sexual harassment issues, pay disparity, and socialization challenges—are also relevant to female parole agents. For example, law enforcement research suggests that female police officers perform their duties in a gendered way, yet only one study to date has examined the extent to which this phenomenon is true among female parole agents (Ireland & Berg, 2006). This article seeks to examine the extent to which female parole agents report using traditionally female traits, namely respect and rapport building, in discharging their duties.

As discussed, existing literature does not adequately examine females in parole. As such, the literature available for comparison comes predominantly from the law enforcement literature. The use of this auxiliary literature base provides some context and substance to areas in parole where no literature yet ex-

ists. Furthermore, it seems an appropriate staring point for comparison, since parole agents carry peace officer status and, as such, are similar in nature to police officers whose primary function similarly is public safety. However, parole agents are not line staff, in the same manner that patrol officers are. Given the experience required to become a parole agent, and given their degree of authority and autonomy in the field, they are closer in rank to field lieutenants than to street patrol (Breedlove, 2005). Further, parole agents manage specialized caseloads comprised entirely of convicted felons. Put simply, parole agents, technically, are sworn peace officers; as such, it seems reasonable to examine the large literary area of women in law enforcement, in order to assess and compare female parole agents; this is especially true in the general absence of empirical research specifically focusing on parole agents.

Nearly thirty years of research on females in law enforcement documents the well-established belief that policing is man's work. Lonsway (2003) describes this as the "myth of physical prowess," wherein police work regularly requires heated pursuits, wrestling dangerous suspects into submission, physically intervening in private disputes which become public ones, rescuing victims from flaming vehicles, and other such formidable activities. According to this paradigm, policing is best left to males, who are more physically capable of strenuous activity and better able to assert themselves in order to take control over difficult and stressful crime scene situations. In practice, most police policies equate brute strength and physical endurance with competence (Benton, 2005). This deeply ingrained construct fuels hostility toward sworn females in law enforcement, which is consistently reported in the literature (Fletcher, 1995; Pagon & Lobnikar, 1996; Warner, 1989). On the other hand, those in traditionally female positions in law enforcement, such as clerical and dispatch staff, are generally accepted by male officers (Pagon & Lobnikar, 1996; Warner, 1989). So long as females fill traditionally female roles that require "caregiving, emotionality, clerical skills and subservience," they too are accepted by their male colleagues (Berg & Budnick, 1986, p. 315; Sims, Scarborough, & Ahman, 2003).

Despite the enduring belief that policing requires substantial physical prowess, a considerable body of research documents the fact that police work is largely sedentary, with regular demands for keen perception and communication skills, and only rare requirements of physical exertion, let alone brute force or strength. In fact, no research has yet documented physical strength as the primary requirement for effective and safe police work (Bell, 1982; Garcia, 2003). Despite this disjuncture between the myth and reality of physical strength in policing, 88.7% of police agencies require physical agility testing as a primary tool to ensure hiring of capable officers. Lonsway (2003, p. 241) calls this the "most fundamental mistake that police agencies make," primarily because physical agility requirements favor physical strength over other essential assets such as thinking capacity, communication skills, problem solving ability, and observation skills. As Belknap (1996) aptly states, "as a result of policing being viewed as 'men's work,' the positive contributions that policewomen may offer (such as using less force) have often been ignored, while physical strength is emphasized" (p. 215). Ironically, while police academies began shifting emphasis towards decision making and communications and away from physical strength in the 1970s, the reality that women do well in these areas continues to escape police departments, parole agencies, and researchers.

By the 1970s, the need for traditionally female traits such as communication and sensitivity in law enforcement became apparent to some discerning scholars (Darien, 2002). Simultaneously, widespread concerns about racial and gender discrimination in the workplace emerged. Women and people of color earned significant gains with the passage of federal employment legislation in the United States (Greene, 2000) and Canada (Tougas, Rinfret, Beaton, & de la Sablonniere, 2005); these laws provided for protection against racial and gender discrimination in the workplace. In policing, these laws became policy through requirements for hiring females and minorities to fill formal and informal quotas (Fletcher, 1995). Police departments reluctantly hired women, not because they embraced gender integration in policing, but as a result of the combined pressure from women's rights groups and federal courts (Pagon & Lobnikar, 1996). This trend of females entering law enforcement by way of legal mandate was also seen in Canada (Tougas et al., 2005), Europe (Price, 1996), and India (Natarajan, 2001), leading to small but steadily rising rates of women in policing.

Throughout the 1980s and 1990s, the number of women in law enforcement grew, including women serving as parole agents; many of these women also held higher ranking positions in policing than ever before, as a consequence of court mandates requiring agencies to hire women as fully operational, sworn officers in the field (Zhao, Herbest & Lovrich, 2001; National Center for Women in Policing, 1999). The rate of females in sworn positions grew by nearly one half a percent each year between 1973 and 1999 (Lonsway, Carrington, Aguirre, Wood, Moore, Harrington, Smeal & Spillar, 2002).

Compared with policing agencies, little has been written about women in corrections; yet, the proportion of women in corrections is about twice that of women in law enforcement. In full, women represent between 26.3% and 33% of all correctional staff nationwide (Pastore & Maguire, 2003). While women are more prevalent in corrections, in general, these numbers largely represent women in custodial positions that are typically lower paid, and considered of lower status, than most sworn law enforcement positions (Lonsway et al., 2002).

The literature demonstrates that a consistent concern remains among male officers and administrators, namely, can women adequately perform the job? Voluminous research documents that female police officers' competence is commensurate with or exceeds that of their male counterparts in both physical and emotional fitness (Sims et al., 2003; Price, 1996). Perlin, Mather, and Turner (2005, p. 861) bio-medically examine physical competence of women in the military, concluding that "women are equal to men in the

physical and cognitive aspects of military readiness, including . . . tolerance of gravity forces, the ability to respond to stress, and the ability to survive in extremes of heat and cold." Friedl (2005, p. 764) examined multiple tests of female readiness for military combat, which demands much greater physical performance than law enforcement duties, and states, "several important assumptions about female physiology and occupational risks were found to be astoundingly wrong." Specifically, in the areas of acute health risks, G-force/flight safety, and personal readiness, the assumed female biomedical inferiority to males in combat was unsupported by extensive laboratory research examining this issue. In other words, women were as physically capable of military combat as were males.

Despite the myth that physical strength, lacking in some women, is required in the profession of law enforcement, a number of studies document that women are as capable of performing the routine duties of police officers as men (Balkin, 1988; Garcia, 2003). As Van Wormer (1981) pointed out over 25 years ago, women are arguably more capable than their male counterparts in areas that require greater concern, patience, understanding, and communication skills; they are also less likely to use excessive force, misconduct, and cynicism than males. Policing styles practiced by females are arguably the "most desirable qualification for a police officer working under a community-policing program" (Garcia, 2003, p. 339). Similarly, female officers can provide insight, perception, and understanding to agencies employing a problem oriented philosophical orientation (problem oriented policing or POP).

Several studies document specific performance differences between genders. The literature suggests that females often employ a style of policing that is generally more effective than that of males—albeit less argumentative and dependent upon physical prowess. Specifically, females rely less upon physical force, are more effective at diffusing volatile situations, are more efficient at de-escalating violent citizens, and are less frequently involved in excessive force incidents than male officers (Bureau of Justice Assistance [BJA], 2001). Furthermore, females possess better communication skills and foster community cooperation and trust more readily than male officers (BJA, 2001). Female officers are less likely to be named in a citizen complaint, allegation, or civil lawsuit than male officers, and they respond more effectively to domestic violence incidents than their male counterparts (Lonsway et al., 2002). Female police officers tend to be less aggressive than male officers, manage violent confrontations better, are more pleasant and respectful to community members, and have better communication skills overall than men (Brown, 1996).

Females are also less likely to be involved in *any* force during the course of their sworn duties. Garner, Buchanan, Schade, and Hepburn (1996) found arrests involving male officers and male suspects had the highest rate of force used, while arrests involving female police officers and female suspects had the lowest. Hoffman and Hickey (2005) found that female officers had a lower rate of weapon use and a lower rate of suspect injury than male officers.

In sum, previous research suggests females perform law enforcement duties in a gendered way, but that this gendered way benefits the occupation of policing. Female officers employ greater communication skills and less force than male officers, creating what seems to be a more successful approach, than traditionally male, aggressive, physically dominated policing styles. Female police officers gain greater suspect compliance, with fewer injuries, and fewer community complaints than male police officers.

In a manner similar to that used to examine gendered performance among female police officers, the current research is an initial examination of gendered styles of performance from the perspective of female parole agents. Toward this end, the current research examines the extent to which female parole agents employ similar strategies in the performance of their field duties as described in the law enforcement literature. The current research explores what female parole agents say about their reliance upon communication skills, problem solving, empathy, and respect, in terms of the performance of their daily activities and duties.

This research addresses the following research questions. First, what performance style(s) do female parole agents subjectively perceive as beneficial in carrying out their duties with parolees in the field? Second, do female parole agents see their occupational approach as gendered, and if so, in what way(s)? Third, to what extent do female parole agents describe their reliance upon various gendered or stereotypically associated tools (such as weapons) and interpersonal skills (such as communication) to ensure personal safety, community safety, and parolee compliance? Fourth, what are the subjective experiences of female parole agents regarding the importance of weapons, communication skills, and relationships with parolees?

## METHODOLOGY

The current study is based on data from a convenience sample of twelve female parole agents in California. The United States Correctional Museum (a pseudonym) provided an initial list of seventeen potential subjects to the principal investigator for an upcoming museum exhibit honoring noteworthy female contributions in law enforcement. A parole agent working for the correctional museum generated a list of women in parole known to that agent and whom he thought might be willing to participate. The list initially included women he believed to be correctional pioneers in California, including the first four women hired in corrections occupations within the state. Researchers contacted all seventeen women by telephone. Of these, thirteen women consented to participate in the study; two women were unavailable, and two women declined

to participate. Of these thirteen initial subjects, three women were excluded from analysis because two were former parolees and one was the wife of a deceased parole agent. Two replacement subjects were contacted by the principal investigator of this study; both consented to participate. The replacement subjects were known to the principal investigator through unrelated parole research and also had longstanding careers in corrections.

### Data Collection

Each subject was interviewed by a team of two research assistants who used a semi-structured questionnaire to explore specific aspects of the subject's life and career. During each interview, one research assistant conducted the interview and the other operated audio/visual recording equipment. Each research assistant prepared detailed written notes immediately upon conclusion of each interview.

The length of interviews ranged from 30 minutes to 4 hours. A portion of each interview was both audio and video recorded. The video tapes averaged 30 minutes in length; the audio tapes averaged two hours in length. The recordings were transcribed verbatim prior to analysis.

### Analysis Plan

Both audio and video tapes were transcribed subsequent to the interviews. These were combined with the detailed notes prepared by each research assistant. Upon review of all notes and transcriptions, a biography for each subject was prepared, which included personal background information, employment history, and particularly poignant comments/quotations. Thematic content analysis was used to analyze the comments made by subjects during their interviews (Berg, 2007). This involved creating a coding frame of potential themes about gender issues in the performance of parole duties, and then slotting subject comments into their appropriate thematic categories. Examples of the various themes discussed in this research were lifted at random from the thematic categories in which they were placed in to avoid *case making* in our analysis (Berg, 2007). Among other findings discussed below, the data described female parole agents' overwhelming practice of gendered supervision styles characterized by intuition, verbal skills, and relationship building as a basis of supervising parolees.

## FINDINGS AND ANALYSIS

As is common in qualitative research, discussion of specific research findings are [is] interwoven with the analysis of those findings. Thus, this section includes both discussion of identified themes and the meaning of those trends in a broader context. Overall, the findings are similar to those suggested by law enforcement literature, namely that females bring arguably unique (and at minimum stereotypically associated), gendered skills to their parole positions. Subjects in this study describe intentional efforts to ensure their personal safety and to successfully manage difficult parolees in the community by relying upon traditionally female associated traits including intuition, verbal communication, and the ability to both develop and effectively use respect and rapport with their parolees.

### Respect and Rapport

Subjects' management of parolees in the community was shaped by gendered supervision styles. The theme that emerged throughout the data is a predominant reliance on cultivating respect and rapport to ensure long term safety and elicit parolee compliance. Subjects explained that they believed that this pattern of respect and rapport built a broad safety net around them during their parole agent activities. Further, the use of respect and rapport fostered an astonishing degree of parolee compliance.

Although most subjects specifically referred to the importance of respect and rapport in terms of the benefits of these attributes for creating safe and effective work environments, the true significance of this approach in dealing with parolees is apparent when considering the descriptive accounts shared by the subjects, with regard to how they defined these terms.

**RESPECT.** Subjects overwhelmingly described the belief that respecting a parolee (through words and actions) resulted in more cooperative parolees. Conversely, disrespecting parolees (e.g., using degrading terms, embarrassing them in front of their families, etc.) resulted in uncooperative and even combative parolees. Subjects emphasized that they intentionally used fairness, dignity, consistency, and professionalism in all of their dealings with their parolees. Subjects articulated the importance of respecting parolees in the parolee's home, their places of employment, and when with their families.

Interestingly, the female agents in this study reported cooperative arrests throughout the course of their careers. Although there were rare exceptions, subjects reported that nearly all of the arrests they personally made involved a minimum of conflict. Subjects also reported that only under rare circumstances did they require the assistance of other (male) parole agents or police officers when effecting a field arrest. Eight of the twelve subjects reported their belief that male parole agents used force in arrests to a far greater extent than they and their female associates did when undertaking field activities—including arrests.

In practice, respect was often displayed with a kind of pseudo-social worker attitude. Donita, for example, a Parole Agent I with 2 years' experience, reported: "I believe parolees are human beings that took a wrong road and need assistance."

Charity's ten year correctional career included time supervising juveniles and parolees. She echos Donita's social-rehabilitative view of parole: "I never really had what I considered an evil person on parole. Never. Well, I finally figured out if I could enhance their lives somewhat, they no longer got in trouble."

Jane has a 42 year correctional history including supervising youths in juvenile hall, serving as a parole agent, and as a parole unit supervisor. She was recently appointed to a state level parole board position. She states the following of her approach with parolees:

> *If you treat them with dignity and respect, then you'll get that in return for the most part. You really need to treat people with respect, give them some dignity. Parolees, if you treat them well and you do your job, even when you have to lock them up, they will respect you and understand that you are just doing your job. If you treat them like a piece of crap, that's what you're going to get back.*

Rita, a 25 year parole veteran with the sex offender caseload, states it this way: "I respect their homes; it was rare that I would take police officers to the home to arrest a parolee. I only did that when a parolee was a real danger and other options [pause] were not successful. I did everything I could to avoid a situation becoming dangerous."

**RAPPORT.** Subjects also described a process by which repeated interactions characterized by respect in the field leads to rapport with parolees. In other words, rapport is the fruit of longstanding respect. The harmonious working relationship that characterizes rapport yields parolee compliance, agent safety, and trust/information from parolees' family and the community.

**RAPPORT AND PAROLEE COMPLIANCE.** Lourdes, a parole supervisor and firearms instructor supervising sex offenders in Los Angeles, recounts the following story. She attempts to illustrate the benefits of establishing respect and maintaining rapport in achieving parole agent safety and parolee compliance. She states,

> *I remember they [the police] were trying to arrest one of my guys. The guy was a dangerous little character. Some guy didn't want to drink with him so he got a little upset and shot him between the eyes and killed him, and he had [the police] just running all over the place trying to figure out where he was. The police department called me and said my guy was a suspect, I said 'he's at work.' So I drove to his work with them, told them to wait outside. They said, 'wait outside? You're going in there by yourself?' I went inside and told him, 'you need to come outside.' He said, 'you found out, huh?' I said, 'uh-huh.' I said, 'I'm not going to embarrass you in here so you walk out and it will be okay.' So, I get him to the car and brought him to the homicide detectives and said, 'here's your guy.' But that's because you need to establish rapport with them.*

Donita employs the same respect and rapport to achieve parole agent safety and parolee compliance. Knowing that technical violations generally result in temporary removal and prompt return to the community, Donita has a long range view of parole supervision. She relates an incident in which she planned to arrest a parolee on an alcohol violation: "He wanted to stay out for Halloween weekend [with his kids]. Instead of taking him in, I told him to report back on Monday at a specific time. He showed up."

**RAPPORT AND PAROLE AGENT SAFETY.** In addition to fostering compliance, eight subjects emphasized respect and rapport in ensuring long term personal safety. Claudia, the gubernatorial appointee, states, "I have encountered situations where a parolee has actually been protective of me, either against people in the neighborhood or other individuals in the home. I think it all boils down to the respect you have garnered as a result of the relationship you develop with this individual."

Lourdes is one of three agents who describes specific incidents in which her parolees "watch her back" in the community. She states:

> *when there is a [good] relationship there, a lot of times when the agent is not paying attention, the parolee is paying attention, and the parolee will have the agent's back. If you treat your parolees firm, fair and consistent, your parolee will watch out for you. A lot of times my parolees would tell me when I go to the projects to see them,"you're not supposed to come at this time; 7 o'clock at night is too late for you to be in the projects."*

The safety gained through good rapport also extended to the parole agents' property. Lourdes relates:

> *I had a car that broke down in the projects, and I told one of my high control parolees, "watch that car—don't let them jack the car." A week later I saw the state car still there. The tow truck driver was too scared to go into the projects and pull the car out. The only thing I lost was the hubcaps. I asked my parolee, "you didn't watch my hubcaps?" He said, "you don't know how*

*hard it was to make sure they didn't take that car." We've had other incidents when agents lost backpacks out of their car, had slashed tires, because they [the community] don't want law enforcement there. But if you treat your parolees right, they know you're not playing games with them; they'll do what they need to do.*

**RAPPORT, FAMILIES, AND COMMUNITIES.** Seven subjects emphasized the importance of knowing the parolees' families in order to obtain useful information and also to secure protection while out in the community.

Rita, who has served as a police reservist, a parole agent, and supervisor, supervised a high risk sex offender caseload. She states it is "important to really know the parolees; knowing their families is critical. When you are doing home visits, the first person opening the door was usually the parolee's mother, father, or grandmother. [I] depend on family for safety."

Letty has a 30 year correctional career as a prison guard, a parole agent, supervisor, administrator, and warden. She states:

*One of the things I found when in the field, was that the families always protected me. If I went into an area, they'd make sure I went away from their house all in one piece. It was very protective, there was a [pause] respect or a feeling that they had about the parole agent, but I never felt intimidated by the community.*

Jane, who is completing her 42 year parole history with a term on a state parole board, reiterates this point. She states, "if you get a real good rapport with a family, they become your eyes and ears. So when you're not there, they'll call you, 'Oh, Ms. Garcia [pseudonym]! It's time for you to take him to jail! He's doing this, this, this and that!'"

## CONCLUSIONS AND IMPLICATIONS

This research lends support to the notion of a gendered performance of duties by female parole agents, quite similar to that described in the literature regarding female police officers. Female parole agents in this study described a variety of ways in which they used stereotypically associated female attributes such as intuition, communication skills, respect, and rapport to effect parole compliance, arrest dangerous felons, garner community support, and ensure their personal safety in the field. Subjects emphasized using their communication skills over their weapons and described believing that they achieved greater compliance than their male counterparts. Subjects in this study underscored the essential importance of relationship building, established by practicing techniques intentionally intended to foster respect and gain rapport. Jane, who has served 42 years in correctional employment, best crystallizes the theme:

*Our whole thing was rapport. Rapport with the parolee, rapport with his or her family and good working relationship with the police so if we have a really nasty arrest, the guy was a potentially violent person, you have the backup to deal with it. You know the parolee, you know the family, know all the community resources.*

The style of gendered parole supervision demonstrated in accounts offered by the subjects in this study emphasized relationships building, over a more demanding, authoritarian style, in order to achieve personal safety in the field and parolee compliance to laws and parole conditions. The subjects practiced respect, characterized by courtesy and empathy, in their interactions with parolees and parolees' families, homes, and places of employment. In turn, subjects describe their perception of this respect evolving into rapport, whereby parole agent, parolee, and the community were engaged in a dynamic mutual relationship which respondents describe as beneficial to all concerned. Parole agents describe having gained increased compliance and personal safety through rapport; while parolees are described as having gained respect, dignity, understanding, and consideration for reasonable exceptions. The community, according to the subjects, achieved enhanced safety derived from these non-violent parolee-community interactions.

Despite obvious cautions, findings in the current research suggest several important policy implications. First, these findings should encourage policies that support enhanced relational approaches for those under community correctional supervision. Practices such as motivational interviewing, which trains supervision staff in positive behavioral reinforcement of those supervised, may well be a viable solution to the revolving door of criminal justice. Second, these findings suggest that such changes as reducing caseload size, thereby allowing parole agents more time and more frequent opportunities for positive interaction with their charges, may actually increase officer safety, improve parolee compliance, and foster successful reintegration of offenders back into the community. Third, other innovative approaches that emphasize respect and rapport building should also be explored. While some critics may view these recommendations as unreasonably "soft" goals when dealing with serious and violent felons in the community, it must be emphasized that these findings suggest an attitude of respect and rapport—not a position of weakness, laissez-faire supervision or an unwillingness to introduce physical strength—promotes the positive outcomes described herein. While legislating attitude may be difficult, it may be an essential element to bring effective community corrections to the 21st century.

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## Application Exercise 5.2

Name of Student:_____

Student ID No.:_____

Course/Section No.:_____

Date:_____

1. "Women and Parole" details the design, methods, procedures, and results of a study of female parole agents in California. Given the information on sampling provided, is an appropriate sample size used? Why or why not?

2. Why is a convenience sample used in this research?

3. What alternate methods could be used to recruit subjects?

4. Is this the most appropriate way to access female parole agents? Justify your answer.

5. How might you be able to *triangulate* the results from the "Women in Parole" study?