

Minority Student Enhancement Program (MSEP)

Faculty Guide
Student Guide
Lesson Plans

Rehabilitation Research
and Training Center
on Drugs and Disability
Wright State University
School of Medicine

Funded by
National Institute on Disability and
Rehabilitation Research



School of Medicine



WRIGHT STATE
UNIVERSITY

MINORITY STUDENT ENHANCEMENT PROGRAM (MSEP)

Faculty and Student Guides

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**Wright State University School of Medicine
Dayton, Ohio**

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BACKGROUND

SARDI

SARDI (Substance Abuse Resources and Disability Issues) began in 1990 when funded by the Center for Substance Abuse Prevention to conduct a pilot project with two goals: 1) to sensitize disability professionals and alcohol and drug rehabilitation professionals to the risks for substance abuse faced by people with disabilities and 2) to begin to look at the prevalence of substance use among people with disabilities in a number of rehabilitation and school settings. SARDI has since grown into a solid research and service delivery program funded by a number of entities.

SARDI's mission is to conduct research, provide collaborative consultation and treatment, and conduct training on the intersection between substance abuse and disability conditions. SARDI considers all physical, cognitive, and emotional disabilities and their correlations with substance abuse. SARDI also investigates disability issues arising as a consequence of substance abuse.

SARDI has a number of components. One component is a chemical dependency treatment and vocational rehabilitation services program for individuals who have both a substance use disorder and a severe coexisting disability. This program is called CAM (Consumer Advocacy Model) and is located in Dayton, Ohio. CAM is based on the successful case management program at Ohio State University called the TBI (traumatic brain injury) Network, and it has a continuing enrollment of approximately 100 people. CAM is also one of SARDI's research sites with two ongoing studies including a multi-site Centers for Disease Control and Prevention study that also involves the Rehabilitation Institute of Chicago and the Ohio State University Medical School.

The training program at SARDI has several projects as well. The primary training activities are state-based educational services that train counselors in both state vocational rehabilitation systems and also state alcohol and drug systems. Another training activity includes the training of special educators and other school personnel throughout the state of Ohio. An additional training component in the area of substance abuse and disability is currently being developed. SARDI will be partnering with the National Association on Alcohol Drugs and Disability (NAADD), a consumer-oriented organization interested in national, state, and regional advocacy on this issue.

In 1993, the National Institute on Disability and Rehabilitation Research (NIDRR) announced the need for a Rehabilitation Research and Training Center (RRTC) in the area of substance abuse, including illicit drug use, among consumers of vocational rehabilitation services. Some of SARDI's and other program's preliminary research relating to vocational rehabilitation services in particular alerted NIDRR to the fact that substance abuse is an issue for many adults with disabilities who are seeking vocational rehabilitation services. This RRTC was awarded to

SARDI and it became the backbone of SARDI's research. The Rehabilitation Research and Training Center (RRTC) on Drugs and Disability was designed to improve vocational rehabilitation outcomes for individuals who abuse alcohol and other drugs.

The RRTC on Drugs and Disability is designed to improve vocational rehabilitation outcomes for individuals who abuse substances. The RRTC conducts epidemiological and evaluative research studies of substance abuse and substance abuse services for consumers of state vocational rehabilitation (VR) programs. Recent legislative changes in benefits, HIV-specific VR services, and the needs of youth transitioning into work are also addressed. In accordance with the NIDRR directive, the research and training activities of the RRTC chiefly address substance abuse as it co-exists with other disabilities. The RRTC also includes an extensive program of training and dissemination.

Stakeholder concerns and interests are addressed by several mechanisms, including a formal subcontract with the National Association on Alcohol, Drugs, and Disability (NAADD). Multiple collaborations are delineated with federal agencies, including the Substance Abuse and Mental Health Services Administration (SAMHSA), as well as professional and consumer organizations, national clearinghouses, other RRTC's, and institutions of higher education.

Minority Student Enhancement Program (MSEP)

Minorities, specifically African-Americans, represent a significant proportion of applicants with disabilities to state vocational rehabilitation programs. Vocational rehabilitation counselors have been challenged to address specific issues such as negative stereotyping and stigmatization, social inequalities, and cultural diversity in order to improve the employment status and quality of life for minorities with disabilities. Though the numbers of minorities having a disability have increased, disparities in rehabilitation services provided to minorities with disabilities still exist.

Of additional concern, there has been an alarming increase of evidence confirming that substance abuse has risen as a primary disability and/or a co-existing condition for consumers of state vocational rehabilitation services. Consequently, rehabilitation outcomes have the potential to be negatively impacted by consumers who are abusing alcohol and other drugs. To compound the problem, the numbers of rehabilitation professionals who are members of minority groups are sparse. One of the intents behind NIDRR's supplemental funding of the RRTC on Drugs & Disability is to increase the number of minority students studying rehabilitation and the number of minority faculty who are interested in rehabilitation research and who will write grant proposals and conduct research in the area of rehabilitation.

In the fall of 1998, the Minority Student Enhancement Program (MSEP) was created with the purpose of providing minority students and faculty from local Historically Black Colleges and Universities (HBCU) with training and experience in disability issues, rehabilitation, and

substance abuse research. Wright State University collaborates with both Central State University and Wilberforce University for the implementation of the MSEP. Central State University and Wilberforce University share a unique and distinguished history in the state of Ohio with regards to higher education opportunities for African-Americans. Central State University represents Ohio's only publicly assisted, historically African-American institution of higher education. Similarly, Wilberforce University represents the nation's oldest private African-American university and has the sole distinction of being the first institution of higher education owned and operated by African-Americans.

Goals

The primary goal of the MSEP is to effect training and collaborative partnerships with minority students and faculty, who will thus expand their capacity as successful and productive researchers. Faculty and students will be collaborators in the efforts of the RRTC to conduct rigorous and meaningful research.

The goals for faculty mentors are as follows:

1. Increase faculty capacity to conduct research and successfully apply for external funding.
2. Collaborate on research in substance abuse epidemiology among people with disabilities, with a focus on African Americans.
3. Increase the capacity of faculty members to act as mentors for minority students.

The goals for the students are as follows:

1. Increase knowledge, skills, and experience in disability, rehabilitation, and substance abuse research.
2. Increase the ability of minority students to be successful professionals, researchers, clinicians, and/or grant applicants.
3. Foster and augment professional writing skills.

Training Components:

- A. *Direct Research Experience.* Students and faculty are involved in research currently underway at the RRTC. Opportunities are available for students to develop research questions based on the instruments and protocols already in place. Students are also trained in conducting research interviews and are tasked with conducting interviews by telephone with past participants in SARDI's CAM program. Students also are trained to carry out the management of research data, including entry of data from epidemiology

surveys and research interviews. They learn how to construct databases and develop code books. Throughout the course of the MSEP, students discuss and complete weekly critiques of journal articles relating to some aspect of rehabilitation research.

- B. *Didactic instruction.* Students are required to participate in a weekly seminar on research in disability and rehabilitation. In addition to RRTC staff presenting topics for discussion within the seminar, MSEP faculty and guest lecturers have also participated. Students also develop a poster presentation based on research conducted. Students are encouraged to submit presentations to national or regional conferences, and to attend such conferences, providing opportunities for exposure to research in the field as well as networking with other professionals.

Program Evaluation:

Evaluation of the MSEP includes pre and post evaluations by students. These evaluations include quantitative items measuring student knowledge in specific content areas and exposure to different aspects of rehabilitation research. Satisfaction surveys are also administered at the end of each term of participation, with feedback to be incorporated in subsequent program planning. Student ratings of the impact of the training program on their skills in various aspects of research are also included in the evaluation. Faculty mentors are also asked to complete an open-ended questionnaire regarding program satisfaction at the end of the third quarter. Faculty mentors are also expected to complete a student progress evaluation twice each quarter as a means of giving students feedback throughout their involvement in the MSEP. Faculty mentors then discuss these evaluations with their students during their mentoring sessions.

THE MSEP EXPERIENCE

Overall, the student and faculty population within the program has reflected a diversity of age, gender, educational background, and career goals. During the past three years, there have been a total of 18 students (four graduate and fourteen undergraduate students) and five faculty who have participated in the program.

What Our Students and Faculty Have Said

“I really appreciated the genuine concern from each of the staff members. Everyone brought different insights and life to the group sessions.”

Student Participant, August 1999

“Excellent program. It enabled me to enhance my research and writing skills. I was also able to enhance skills needed to work with a team on a new and complicated research topic.”

Student Participant, August 1999

“I believe the MSEP has been and will continue to be of great benefit to those students who may not otherwise have the opportunity to develop their own writing skills and to be exposed to intensive research in the field of rehabilitation”

Student Participant, May 2000

“I gained great insight in using scientific journal databases and the SPSS package. The weekly seminars and the extra weekly hours spent at Research Park really developed my technical writing. The MSEP is a wonderful program that exposes students to opportunities they probably would not have otherwise.”

Student Participant, May 2001

“I trust that funding with NIDRR will be revived, or that other funding sources will be located in order to continue a most viable program for minority students.”

Faculty Participant, May 2001

HOW TO USE THIS MANUAL

This program is designed to be covered in as little as 10 weeks or as long as 30 weeks depending on the time available for the class. Each lesson topic can be covered in one session or can be broken into two or more sessions.

SARDI and the RRTC on Drugs & Disability conducted the program by selecting students from Central State University, Wilberforce University, and Wright State University. The majority of students were juniors or seniors, and they had declared majors in the human services field. Students were required to attend weekly seminars and to complete assignments and attend meetings with a mentor outside of seminar time. Students attended an average of 15 seminars throughout the course of their involvement in the MSEP. Some students did attend additional seminars and others completed additional assignments related to other topics in the field of rehabilitation that were not offered formally through the MSEP.

The seminars were taught by a variety of professionals. The MSEP staff conducted many of the seminars, with supplemental work delivered by faculty mentors. Some topics were taught by guest speakers from Wright State University or speakers from other components of the SARDI program.

There are other ways that the program can be implemented as well. For example, the program can be utilized as a course offered formally for credit through a university and can be taught by university faculty as they would any other courses. The program could also be used as a seminar or as independent study where the faculty and student choose the best sessions or topic areas in which to focus.

The session materials are divided into the following components:

Lesson Plans: The lesson plans themselves contain a purpose statement, learning objectives, key points, a session outline, and session notes. The instructor should be able to follow the lesson after reviewing the materials in the plan. References for additional information are also included as applicable.

Overheads: Most lessons also contain a number of pages that can be converted into overhead slides. These slides contain key points and provide the instructor with an outline to follow during the session.

Handouts: Most of the lessons also include pages that can be photocopied and used as handouts. These contain supplemental materials and activities for the topics that are addressed.

**MINORITY STUDENT
ENHANCEMENT PROGRAM
(MSEP)**

FACULTY MENTOR HANDBOOK

**Rehabilitation Research and Training Center on
Drugs & Disability**

**SARDI, Wright State University School of
Medicine Dayton, Ohio**

<http://med.wright.edu/citar/sardi/>

INTRODUCTION

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The backbone of SARDI's research component is the Rehabilitation Research and Training Center (RRTC) on Drugs and Disability funded by the National Institute on Disability and Rehabilitation Research (NIDRR). The RRTC has several research programs running concurrently. One is a nine state epidemiology study which specifically looks at the alcohol and other drug use of adults with disabilities who are receiving state vocational rehabilitation services. Another study looks at the efficacy of SARDI's CAM program which is a chemical dependency treatment program for adults with disabilities who also experience alcohol and other drug related problems. The research looks at program outcomes and the cost effectiveness of the program. Another study run by the RRTC is more qualitative in nature and looks at the barriers to employment faced by individuals who are living with HIV/AIDS.

SARDI and the RRTC on Drugs & Disability work closely with the National Association on Alcohol, Drugs, and Disability (NAADD). Multiple collaborations are delineated with federal agencies, including the Substance Abuse and Mental Health Services Administration (SAMHSA), as well as professional and consumer organizations, national clearinghouses, other RRTC's, and institutions of higher education.

MSEP

The Minority Student Enhancement Program (MSEP) was created with the purpose of providing minority students and faculty from local Historically Black Colleges and Universities (HBCU) with training and experience in disability issues, rehabilitation, and substance abuse research. Wright State University is collaborating with both Central State University and Wilberforce University. Central State University and Wilberforce University share a unique and distinguished history in the state of Ohio with regards to higher education opportunities for African-Americans. Central State University represents Ohio's only publicly assisted, historically African-American institution of higher education. Similarly, Wilberforce University represents the nation's oldest private African-American university and has the sole distinction of

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- B. Didactic instruction. Students are required to participate in a weekly seminar on research

in disability and rehabilitation. In addition to RRTC staff presenting topics for discussion within the seminar, MSEP faculty and guest lecturers have also participated. Students also develop a poster presentation based on research conducted. Students are encouraged to submit presentations to national or regional conferences, and to attend such conferences, providing opportunities for exposure to research in the field as well as networking with other professionals.

Program Evaluation:

Evaluation of this component has been incorporated into the current RRTC evaluation, and includes pre and post evaluations by students. These evaluations include quantitative items measuring student knowledge in specific content areas and exposure to different aspects of rehabilitation research. Satisfaction surveys are also administered at the end of each term of participation, with feedback to be incorporated in subsequent program planning. Student ratings of the impact of the training program on their skills in various aspects of research are also included in the evaluation. Faculty mentors are also asked to complete an open-ended questionnaire regarding program satisfaction at the end of the third quarter. Faculty mentors are also expected to complete a student progress evaluation twice each quarter as a means of giving students feedback throughout their involvement in the MSEP. Faculty mentors then discuss these evaluations with their students during their mentoring sessions.

LEADING THE MSEP SEMINAR

Introduction

The goals for the leader of each seminar are to help students develop a certain mastery of the content of the lesson and to assist students in becoming better learners in general. Imparting knowledge is only a small part of the teaching component of the MSEP. It is equally, if not more, important to provide opportunities for students to develop the self-confidence that they will need to learn independently in many situations and environments. This is particularly important in today=s rapidly changing technological world where the skills of creativity, flexibility, insight, judgment, and problem solving are essential for success.

In addition to teaching a body of knowledge related to rehabilitation, the MSEP focuses on developing communication skills and social responsibility. Successful research professionals must be able to effectively propose or explain a project, and they are aware of the social ramifications of their work. Students need opportunities to develop these skills through discussion and through writing. The Faculty Mentors need to consistently and repeatedly let students know how important effective communication will be to their future careers.

Seminar Preparation

The first step for the Faculty Mentor is to make certain that he or she completely understands the overall goals of the MSEP and the specific objectives of the session. Once these are clear, the Faculty Mentor will need to consider how to determine whether the students have actually accomplished the objectives outlined in the lesson plan. It is likely that the Faculty Mentor will develop an activity, an assignment, or a series of questions that will show whether the student has mastered the materials presented. It will be important to remember that only asking students to recall what they have just learned is unlikely to promote an active and long-term knowledge of the subject.

Considering the Audience

There are a number of factors that will influence the make up of the MSEP class. For example, for some students, the money paid for participation will be the primary motivating source; however, for other students, the topics to be discussed and the opportunity to develop and practice research skills helpful for graduate school will be the primary motivating source. In addition, although the students will all be at least of a Ajunior@ standing in their Bachelor=s

degree program, they still will bring a variety of skills to the MSEP. By considering these factors and talking to other Faculty Mentors who have been involved with the MSEP in the past, the make up of the MSEP class can be envisioned. The characteristics to think about are the students= motivations for enrolling in the MSEP, their educational and personal backgrounds, and their study habits. Because many undergraduates are still investigating various careers, the Faculty Mentors need to demonstrate the positive aspects of the field of rehabilitation research and its relevance in society.

Ways to Cope with Nervousness

- X ***Practice.*** Since there is a chance that the Faculty Mentor may not be leading a seminar in his or her primary area of expertise, practice will be important. Trying out the material in advance will certainly add confidence particularly if the Faculty Mentor can practice the material in front of an audience.
- X ***Concentrate on the key points of the session.*** The Faculty Mentor can concentrate on the key points of the lesson and on the needs of the audience. If the topic is one which the Faculty Mentor feels is important, this will come across in the session if the focus is on the needs of the students.
- X ***Have a strong introduction.*** The Faculty Mentor will probably be most nervous at the beginning of the session. For this reason, he or she should start with an introduction that is easy to remember and that will interest everyone. Having an activity that is fun and interesting instead of jumping into a lecture may be a helpful strategy.
- X ***Use audiovisual aids.*** Using transparencies or slides can help keep the Faculty Mentor on track and can help ensure that the key points to the lesson are covered. Multimedia presentations and handouts are also very useful to keep the students' interested.
- X ***Have a Confident Attitude.*** Showing confidence and using the technique of "acting as if" can help the Faculty Mentor cope with nervousness. The students will believe the attitude that the presenter shows.

Lecturing

The MSEP has been designed to feature a didactic session that lasts between 45 minutes and an hour. Because the attention span of most learners is much shorter than the standard length of time allotted for these activities, the Faculty Mentor will need to be cognizant of how well the students are paying attention and plan accordingly. Good lectures are those that challenge the student to think imaginatively and conceptually about a concept or problem. A good lecture can

be compared to a good story, where the main theme and key points will be remembered long after the small details are forgotten.

The structure and pace of the session will be important to consider when leading the MSEP class. The students are likely hearing the information for the first time, and they may never have had exposure to the concepts discussed prior to the session. The students will need to be able to identify the most important points through the Faculty Mentor=s repetition of material and the points that are emphasized and summarized. Another successful technique, according to The Center for Teaching and Learning at Stanford University (1998) is to "Tell the students what you=re going to tell them; tell them; then tell them what you=ve told them." This includes providing a brief outline of what points will be covered and reviewing the main points at the conclusion of the lecture

Students appreciate understanding how the material presented in the MSEP seminars relates to other classes that they are taking, to other fields of study, and to society as a whole. Providing this type of information helps students understand why the material is being presented and how it may apply to them personally in their future careers. The ability to generalize and apply information to other situations is a critical skill to develop and certainly one that will make the MSEP students more marketable and successful in the future.

Another way to keep students interested in the lecture is to vary the presentation of the materials. At a minimum, the Faculty Mentor should vary his or her voice, movements, expressions, and tempo. One of the worst things to do is to read the lecture notes to the students. Even if the Faculty Mentor feels more comfortable referring to notes frequently, he or she should try to avoid reading verbatim and should use a lot of eye contact between glances at notes. If the Faculty Mentor loses his or her place in the lecture, pause to think instead of filling in with words such as AOK@ and Ayou know.@ The key for the Faculty Mentor is to display through enthusiasm that the topic is both interesting and intellectually valuable.

The way that the Faculty Mentor deals with questions and answers also sets the tone of the seminar. The students need to feel that they are valued equally. For example, if a student seems hesitant to ask a very basic question, the Faculty Mentor can express pleasure that the question was asked by saying AI=m glad you asked that. A lot of students get confused about that point.@ If a student answers a question incorrectly, it may be beneficial to let the student know what was good about their answer or his or her approach to the answer before very tactfully pointing out what was incorrect. The Faculty Mentor should also admit when he or she does not know the answer to a student=s question. In this situation, the Faculty Mentor can create a learning opportunity by finding the solution with the students or by having them work together to find the answer.

Audiovisual Aids

Any kind of audiovisual aid can help organize and strengthen a lecture. The most commonly used audiovisual aids are the blackboard, overhead projector, and hand outs. Each of these aids has positive aspects and pitfalls to avoid.

The blackboard can provide a way to interact with the audience and emphasize key points. The Faculty Mentor can choose to write only the key ideas on the board or his or her body language can create emphasis. For example, the Faculty Mentor can walk to the board and point to the key idea which will create a focus on that information. The Faculty Mentor should practice writing on the blackboard to determine what writing is the most readable in terms of size and darkness. Several points must be observed when using the blackboard: 1) don't stand in front of what has been written; 2) avoid long periods of time where there is no eye contact with students; and 3) don't erase things right away B make certain that students have the chance to copy the information.

The overhead projector is still a popular audiovisual aid. The overheads can be made in advance, and they can be used over and over again. This allows more time for the Faculty Mentor to discuss and explain the information. It is also easier to ensure that the materials are well-organized and easier to follow during the lecture. There are some cautions, however, to using overheads. The Faculty Mentor must be certain that they overheads are readable and easily understood. Overheads also should not contain too much information. This makes them unreadable, but also can overload the students with information that may not relate directly to the key points of the session. It is also easy to just read the overheads, which will lose the students interest right away and will inadvertently give them permission to stop listening to the lecture and to start reading on their own.

Handouts can also be a useful tool providing additional information to the students or summarizing the key points to a lecture. Using handouts will ensure that the students have the detailed and accurate points that were made in the lecture. The Faculty Mentor must be certain that not all pertinent information is included on handouts, however, or the students may not pay attention to the lecture believing that they can simply read the notes later. Activities and assignments are also good uses for handouts.

Leading Discussions

A good and productive discussion must be a collaborative effort. The Faculty Mentor who is leading a discussion will be dependent on the MSEP group, and will not have control over such factors as the students' level of preparation for the seminar or their level of motivation to participate. A discussion must also be prepared for in advance. Good planning can help the Faculty Mentor gain some control over the class discussions. The Faculty Mentor may want to structure the discussion in such a way that it will be very directive by asking most of the

questions or relatively non-directive by letting students determine what information will be discussed. There are advantages and disadvantages for both types of discussion; however, it is critical that the Faculty Mentor leading the discussion as well as the other faculty present at the seminar do not answer all of the questions or start their own discussions.

If the Faculty Mentor is doing most of the talking, the discussion is not working. Also, if only one or two students do most of the talking or if all of the questions are answered to the faculty and not to the group as a whole, the discussion is not working the way it should to maximize learning.

One technique that may work with MSEP students is to vary the types of questions that are asked from those that are very easy to answer to those that are much more complex. It also is helpful to begin with questions that cover material that the students are at least relatively comfortable with before moving on to more challenging questions that will challenge the students to be more creative and/or reflective. It is critical to allow sufficient wait time after asking a question before repeating or rephrasing it. This can be very difficult to do! However, allowing time lets the students know that they should be thinking and that the answer doesn't have to be quick. In the same light, allowing time for reflection after a student provides an answer can provide other students with an opportunity to add their opinions or to begin a discussion point.

The Faculty Mentor needs to encourage active participation by all students and try to keep the students talking to each other and not just to the MSEP faculty. One of the overall goals of a discussion is to allow students to have insights into the material and to sharpen their critical thinking skills. Several techniques which may challenge students and stimulate discussion include 1) begin the session by having students write for five or ten minutes about a selected topic which will be included in the discussion, and 2) have a different student responsible for taking notes during each discussion session. These notes can then be copied and distributed to all students at the next seminar. These activities will allow for practice in writing as well as reinforcing the importance of writing in organizing thoughts.

Writing Letters of Recommendation

It is likely that MSEP students will ask the Faculty Mentor to write one or more letters of recommendation for them. The letter may be for graduate school, an internship, or employment. The first step will be for the Faculty Mentor to consider whether or not he or she knows the student well enough to write a helpful recommendation. If the Faculty Mentor has any reservations, it is better to be honest with the student by explaining the circumstance. If this happens, the Faculty Mentor may be able to assist the student in identifying other professionals who may be able to write the letter for him or her.

If the Faculty Mentor agrees to write the letter, it would be beneficial to meet with the student and review a resume and possibly work from the MSEP or from other applicable classes. This

information can provide insight into the student=s background and other interests and activities outside the classroom. This also is the time to ask the student questions about his or her specific purpose such as why the student wants to attend graduate school or have a certain type of job. The student also needs to provide the exact name and address of the person to whom the letter should be sent and a deadline for the letter.

The letter should be written as soon after the meeting as possible, while the information is still fresh. It is easy to forget information B especially if more than one student requests a letter in a short period of time. A standard business letter format can be used. Letters are generally one or two typed pages and contain the following information:

- X The Faculty Mentor=s relationship to the applicant and length of time that he or she has known the student.
- X Details about the applicant=s skills, strengths and weaknesses, evidence of motivation, and progress in the MSEP. The letter should be written with confidence, but should not be inflated in order to maintain the Faculty Mentor=s credibility as a source of recommendation.
- X Information about how the above relates to the student=s choice of graduate program or job. The Faculty Mentor should try to tailor the information to the audience. For example, the Faculty Mentor may need to explain why the skills learned in the MSEP will translate to a work setting or the graduate program.
- X The Faculty Mentor=s title and telephone number or address where he or she can be reached.

The Faculty Mentor should be certain to keep a copy of the letter for his or her files. Employers in particular may call to ask for additional information or for a verbal reference. The student may also come back later to request another letter. Writing letters of recommendation can be time consuming, but the MSEP students will benefit greatly from having the Faculty Mentor as a source of recommendation.

Conclusion

Faculty Mentors in the MSEP have much responsibility, and many of these individuals are involved with the MSEP as a Asecond job.@ This position can be very rewarding for those professionals devoted to improving learning opportunities for students. Faculty Mentors are encouraged to become as involved in the MSEP as they are able with their other commitments, because the students do value the opportunities to develop relationships with the faculty and the faculty provide the program with much of its depth. Providing these learning opportunities are an investment in the future of rehabilitation!

MENTORING

Introduction

The MSEP works best when the faculty takes the time and effort to mentor one or more students. Students who are mentored are more likely to develop confidence in their ability to learn new information and to apply that information to their own situations. Confident students are more likely to graduate from college and to pursue careers that interest and excite them! They are more likely to become productive members of society.

A mentor for the MSEP is a faculty member at one of the following institutions: Central State University, Wilberforce University, or Wright State University. At times, there may be additional individuals who are willing and able to serve as mentors. These may include professional staff from these institutions and professionals working successfully in the community. In order to provide mentorship, the faculty member needs only be interested in the student and have the ability to provide support and reinforcement and to be a constructive role model. The best mentors are caring, good listeners, and able to assist students by bringing out strengths that the student already has.

What is Mentoring?

Mentoring is an ongoing relationship between two individuals where one individual offers support, guidance, and assistance to another person. Generally, adults serve as mentors for youth or for other adults; however mentors can be youth who provide support to other youth in a peer relationship. Mentors can provide the sustained presence of a positive and caring adult role model, which is one of the most recognized resiliency traits for youth who successfully avoid problems with alcohol and other drug use.

In general, mentoring can be viewed as occurring naturally or as being planned. Natural mentoring occurs through friendship, teaching, and working together as colleagues. Planned mentoring is more structured where mentors and participants are selected and matched through formal processes. Some primary examples of planned mentoring are the Big Brothers/Big Sisters of America which provides quality volunteer and professional services to help children and youth become responsible men and women, and One Hundred Black Men, Inc., a nonprofit organization of men in business and industry who share the goal of improving the quality of life for people of color.

Formal mentoring programs often have a primary focus which frequently is one of the following: 1) educational mentoring which helps students improve their academic levels; 2) career

mentoring which helps youth and adults develop and enhance the necessary skills to enter or continue a career path with more success; and 3) personal mentoring which provides support to individuals during times of personal or social stress and generally provides a focus on decision making. Each of these focuses is equally important to the individuals who are being mentored, and then decision about which focus to take in a mentoring relationship is dependent on the needs of the individual at any given time.

Why Be a Mentor?

There certainly is evidence that young people today need positive adult role models. With the changes in the American family systems through divorce, two-parent working families, and the scattered nature of extended families, consistent and frequent adult support is not as readily available to youth. Research indicates that more preventive care is critical to fill the void left by busy or absent parents. Some young people are lucky in that they have other family members such as grandparents, aunts, and uncles in close enough proximity to provide emotional and regular support. Other youth have caring neighbors or have support through community and religious organizations. These adults can often fill in some of the gaps in attention and care, and they can provide guidance and a sense of support B all of which are very important in today=s society which does not always reflect positive images or beliefs.

In communities where individuals don=t know their neighbors, where many households are run by a single parent, where there are more time pressures for working families, caring adults outside the family are even more crucial to the long term success of youth and young adults. Youth from these families are perhaps in the greatest need for help from outside sources, and yet they are the least likely to get the help that they need. This is where mentors come in to the picture!

Mentoring is one of the best means of bringing caring adults into the lives of youth and young adults. Another why of looking at it is that mentoring can represent a return to a tradition where the entire community is called upon to assist in providing support and guidance to young people by both nurturing them and challenging them. Mentoring alone won=t remove all obstacles facing young people; however, it can have a very positive impact on young lives. When mentors offer friendship, guidance, and positive role modeling over a sustained period of time, the young people receiving this support begin to believe that they can succeed and that someone truly cares about their success.

Mentors are leaders to the individuals whom they guide. Having strong leadership skills, although not absolutely necessary, does come in handy! Mentors need to develop a rapport quickly and motivate their youth or young adults without having direct authority over them. Mentors are responsible for the impression that they make on the students. In addition, mentors need to remain aware of not only what they say, but when they say it and how they say it. Rather than thinking of this as a frightening role, think of it as an exciting leadership role! Mentors who

are able to inspire their students create positive and lasting impressions. Youth and young adults who are motivated to succeed by someone without direct authority over them often develop into leaders themselves B a truly priceless gift.

What Do Mentors Do?

Although the actual work of mentors will vary dramatically, every good mentor accomplishes these two things: connecting with their charges and using that connection to deliver consistent, positive messages. Connecting means gaining the trust of the youth/young adult and developing a sense of mutual respect which includes making a commitment to a personal relationship which lasts throughout the period of mentorship. The mentor then can use this connection to project the message to the youth/young adult that he or she is worth the time being spent by all parties and that he or she is a valuable person. The mentor can offer this through words and actions, through knowledge and personal experience that he or she can and will be successful in life. The overall message is always "You are important and I care what happens to you."

What mentors do is determined by the program and by the specific needs of the youth or young adult. Some of the more common focuses of mentoring programs are 1) academic assistance where the goal is to help improve grades and to improve both attitude and self-confidence; 2) assistance in accessing college by helping youth/young adults recognize the importance of higher education and how to actually be accepted into a college; 3) career preparation where mentors assist individuals to become prepared to enter the work force; and 4) role modeling positive behaviors and lifestyles.

What Makes a Good Mentor?

Research conducted by the 100 Black Men of America, Inc. (Dortch, Jr. & The 100 Black Men of America, Inc., 2000) has brought to light what is referred to as the ATen Tickets to Mentoring.® These are discussed below with additional information relating to the MSEP included.

- X ***Believing that mentoring is building a relationship.*** For mentoring to be successful, it can=t be viewed as just a project that requires an hour or two per week. There needs to be a commitment to the relationship, and the mentor must be willing to put in as much time as needed to building the relationship. This may actually be one of the most difficult tasks for the mentor in the MSEP. The relationship will be and must be different from an academic advising relationship, and the Faculty Mentor may already have a number of students in that particular role. For the MESP, there has been a commitment for a limited number of hours per week, and the Faculty Mentor must work to balance that commitment with the fact that sometimes the mentees will need more time than what has been negotiated per week. It is also important to realize that this balance can be met with

some creativity and with alternatives means of meeting and communicating, such as through e-mail, letters, and phone calls.

- X ***Acting as a role model for mentees.*** Although many individuals who have been successful in their fields have been viewed as role models, the Faculty Mentor for the MSEP is in a much better position to be a true role model. Some people look to celebrities to fuel their goals; however, the most impact on the lives of the MSEP students at this time is likely to be their Faculty Mentor. This relationship will have a significant impact on the mentees who need strong professionals to model how to learn, how to treat other people, and how to approach difficult situations in life.
- X ***Talking to mentees about what is right and wrong.*** Although mentees in the MSEP will be older and will have had enough life experience to understand the basics of right and wrong, they still will benefit from assistance in learning the rights and wrongs of becoming professionals and contributing members of society. One of the key roles that the Faculty Mentors play in this area is to help mentees learn from the mistakes that the Faculty Mentors have made when they were students and newer professionals. This sharing is also another way to develop a growing relationship.
- X ***Projecting wholesome values.*** The key here is to walk the talk. The mentees will easily be able to identify hypocrisy and inconsistencies. The relationship must be honest, and the values shared through talking and through actions need to convey healthy lifestyles and values. One of the values to convey to the MSEP mentees will be the importance of their commitment to the program and to learning the materials covered in the program. Mentors are in a great position to teach life values without even trying. Mentors can encourage young people to have a positive identity and can discourage negative identities that are frequently heard from young people such as "I'm a failure." or "I am a poor student." Mentors can also look for a student's beliefs and support the positive beliefs ("I can succeed.") and work on modifying the limiting beliefs ("No college will ever accept me. ").
- X ***Taking satisfaction from mentoring because there is something important to offer the right young person.*** It may be easy for the Faculty Mentor in the MSEP to convince him or herself that there is nothing to offer to the mentee because their professions do not include the area of research or rehabilitation. It is critical that the Faculty Mentor have a strong sense of self confidence and has the firm belief that he or she can make a positive difference in the student's life.

- X ***Doing everything possible to develop trust with mentees.*** Developing a trusting relationship will be a satisfying experience for both the Faculty Mentor and the mentee. When trust is established, the mentee will be in a position of truly believing the Faculty Mentor when he or she says, *I am proud of you.* or *You have done very well.* One of the most important ways to develop trust is to show up for all scheduled meetings and to follow through on what has been agreed upon. Another way to establish trust is to remember what has been discussed and to keep all personal information private. Some mentees will very eagerly jump into the mentoring process while others may be hesitant to be involved in a mentoring relationship. A bond needs to be developed through a trusting relationship. Trust usually takes a while to develop; however, a Faculty Mentor in the MSEP has only a brief amount of time to spend with a mentee and must try to establish trust more quickly. One way to do this is to use a series of promises, each one becoming more complex and important to the relationship. For example, a first promise may be personal such as bringing a picture of a favorite pet or of a child to the next meeting. This can be followed by the promise of bringing a book or an article that the mentee will find helpful in his or her pursuits. This will show an effort to work with the mentee. Of course, the Faculty Mentor must be certain to follow through on any promises in a timely manner. Promising to give the mentee feedback in two days means literally that. If the Faculty Mentor waits four days or until the next mentoring session, the mentee may already have lost trust.
- X ***Telling mentees that they are cared about.*** Some mentees may have never been told that they are cared about. Comments about positive changes that have been made can go a long way to let the mentee know that his or her Faculty Mentor cares. In addition, non-verbal cues such as maintaining eye contact and using tone of voice to convey positive messages lets mentees know that the Faculty Mentor is a caring adult in their lives. Remembering a mentee's birthday or other significant life event, sending a card or e-mail, and asking questions that follow up on previous conversations are all ways to let the mentee know that he or she is cared about.
- X ***Pointing out the right behavior for certain situations.*** There will be new situations for the mentees during their involvement with the MSEP. For example, most mentees will never have been in such a small classroom environment and will not have the attention of as many professionals at one time. In addition, most mentees will never have presented poster papers or other presentations for professionals. Assistance and support to be successful in these new situations will be important for the Faculty Mentor to express.
- X ***Helping mentees develop goals.*** Mentees in the MSEP will probably need assistance to develop goals related to their training. Many of the mentees may also need assistance in planning goals related to furthering their education or to putting the education that they have into a career. It will be important to let the mentees know at every opportunity that

one of the ways to reach their goals will be to do everything to the best of their ability. Learning to develop realistic goals is difficult and is a skill that must be practiced. The mentoring relationship is an excellent place for mentees to practice this skill.

- X ***Listening to whatever the mentee wants to talk about.*** Sometimes the goals for a certain session will just have to wait. The mentee may need assistance and support in an area of his or her life that is totally unrelated to the MSEP. Expect this to happen, and when the situation arises, the Faculty Mentor can just remind himself or herself that the mentee may just need to talk. What is talked about sometimes won't even make sense to the Faculty Mentor. Listening and providing support will be the best thing that the Faculty Mentor can do. These times may well be the times that the mentees will remember the clearest and with the fondest memories.

Other Tips for Mentors

Many of these tips were compiled and modified from AA Handbook for HP Mentors® written by Bill Wear of the International Telementor Center.

- X ***Don't Give Up Too Easily.*** If the relationship seems strained and very slow in forming, or when the student doesn't seem to be responding, don't give up! Some students have difficulty expressing their thoughts and feelings B particularly if they are overwhelmed by a new situation. For some of the MSEP students, this mentoring relationship will be the first B or one of the first B relationships of this kind that they have had. If the mentor is patient and continues to nurture the relationship, good results should begin to become apparent. Sometimes things that happen early in the mentoring relationship become a very important part of the student's life. This is why it is important for mentors to continue to believe that they can have a positive impact on a young person B even if the results are not seen for years. As university faculty and professionals, you may have experienced the situation where former students return to thank you for the help that they were given years before. Committed mentors also will have this type of experience. Mentors do touch lives in positive ways.
- X ***Plan the Mentoring Sessions.*** Plan the amount of time that will be spent on mentoring relationship each week. This will keep the student from being neglected due to other obligations, and it will also keep the mentoring relationship from taking over the mentors life. Also, it may be helpful to create a time line for the relationship. This can be a private time line that is not shared with the student but one that will assist in measuring progress. The time line can be in the form of a list of tasks to be accomplished or topics to be discussed. When the mentor is not prepared, it is easy for the mentee person to feel

negative about the relationship and questions whether or not the mentor truly cares about him or her.

- X ***Create a Mentoring Plan.*** The mentor and the mentee may want to develop a plan of action together. This plan can include short term and long term goals for the relationship. Designing a plan helps both parties understand where the focus of the relationship will be. The long term goal may be related to continuing education with short term goals of exploring different career paths, exploring different colleges, and finding financial aid. Progress can then be evaluated monthly or quarterly.
- X ***Be Prepared for Excuses.*** Even the most conscientious student will at times test their mentors. Some mentees may try to talk their mentors into doing activities or tasks that they should do themselves (such as completing job applications, conducting literature searches, or determining cut off dates for college applications). Mentors need to be prepared for this type of situation and have answers prepared in advance. Mentors will need to strike a balance between being helpful and responsive yet not giving in. Just this once. Mentors certainly can and should discuss or maybe even offer some advice or suggestions; however, they need to be careful not to actually solve a problem for the student.
- X ***Keep Time in Perspective.*** The early phase of a mentoring relationship generally takes the most time. It is important for the Faculty Mentor to discuss time commitments early in the relationship to develop a mutual understanding. Expectations and time restraints can be discussed early to avoid later problems. Some potential time savers include avoiding squeezing session in between other activities, such as classes or academic advising hours, where there isn't sufficient time to provide complete information and devote complete attention. Also, sessions can be planned in advance in order to maximize the time that is spent together. A strategy for using time wisely includes scheduling time in advance, monitoring how the time is spent, and spending quality time with the mentee.
- X ***Use Good Listening Skills.*** Both the verbal and the non-verbal aspects of listening play a large role in building trust and in communicating a caring attitude. One of the best ways to communicate in a mentoring relationship is to use what counselors call empathetic listening. The listener (mentor) reflects the feeling and the object of the feeling back to the student. This technique gives validity to the mentee's feelings and thoughts and can further establish trust. The pronoun *You* or *Your* is frequently used, and the listener needs to try to get to the underlying emotions being exhibited or spoken. For example, a student may say *I hate my classes this term. The professors don't like me.* The mentor

may respond by saying “You sound frustrated by your classes this term, and on top of that you don’t believe that your professors like you. Can you tell me more about this?” In this scenario, the student’s statements have been reflected back in a non-judgmental way which hopefully will allow the student to feel comfortable enough to tell the mentor more. If the mentor had immediately said, “I’m sure that your professors all like you,” the student may not be willing to take the conversation further. In addition, eye contact, tone of voice, and facial expression are very important.

- X ***Ask Open-Ended Questions.*** The mentee should spend more of the session time talking and the Faculty Mentor listening, particularly in the early stages of the relationship. One way to learn more from the mentee is to ask him or her questions that will allow him or her to express opinions and beliefs. In general, questions beginning with “when,” “how,” “who,” and “what” elicit more relevant information. Questions beginning with “why” must be used carefully because these questions can set up a defensive response in the mentee. For example, the mentee shares an experience that happened at school, and the mentor asks “Why did you handle the situation that way?” The mentee may feel that he or she needs to justify the decision that he or she made. The Faculty Mentor may have learned more if he or she had asked, “What happened next?”
- X ***Remember What a Mentor Is and What a Mentor Isn’t.*** A mentor plays a number of roles such as guide, coach, friend, and responsive adult. Although there may be times when the mentee wants a mentor to fulfill other roles, a mentor isn’t a foster parent, counselor, academic advisor, or conscience. The Faculty Mentor may need to remind the mentee about what role is appropriate as the need arises. Most of the time, the mentoring relationship will develop without serious issues arising. Faculty Mentors do play an important role, but that role does not include any type of psychological treatment or family counseling. Know about the local support systems that can assist with these emergencies. The most a mentor should do is to help guide the mentee to the appropriate source of professional help.
- X ***Know How to End the Relationship.*** Even relationships that start slowly or that were stressful can be difficult to end when the time comes. Some steps to follow when winding down the relationship include: 1) providing a summary “either written or oral” of the year’s accomplishments; 2) letting the student know what impact the relationship has had on the mentor; and 3) pointing out the positive gains that the student has made “particularly in regards to life values.” In some cases, the mentor may decide to continue the relationship on a more casual basis. This situation will be up to the mentor and the student. The mentor will need to use professional judgment as to whether or not this would be a healthy situation. If there is any doubt, the mentor should seek additional advice or make the decision not to continue the relationship.

Conclusion

The Faculty Mentors in the MSEP have a real opportunity to empower students to gain the confidence and skills necessary to be successful in life. Through this helping process, the mentor also has a chance to grow and to become more self-fulfilled. The students of the MSEP and of similar programs may become the leaders of their communities, able to face the challenges and demands of life with responsibility and confidence. The mentoring process is perhaps the most effective way of encouraging students to become leaders. Faculty Mentors are likely to feel as many rewards as the students through this process, and they should enjoy the satisfaction of having a role in assisting mentees reach their goals. Mentors should not be surprised when years down the road they hear from one of their mentees thanking them for the support, guidance, and friendship that changed their lives in a positive way.

RECRUITING STUDENTS

One of the most critical aspects of the MSEP is to recruit students for the program. All Faculty Mentors in the MSEP are asked to assist in the recruitment efforts. The MSEP accepts applications from students who are enrolled in Central State University, Wilberforce University, or Wright State University. They must also meet the following qualifications:

- X a junior or senior level student in good academic standing
- X currently majoring in one of the social sciences
- X highly self-motivated
- X have at least ten (10) hours per week to devote to the program
- X have Monday evenings from 5:15 pm to 7:30 pm free for mandatory weekly seminar meetings
- X have some form of dependable transportation

The students are asked to submit a one page application form and a letter of interest that is between one and three pages. This letter should answer the following questions:

- 1) What do you expect to learn as a participant in the program?
- 2) How do you believe the program will benefit you?
- 3) What are your plans after completing your undergraduate degree?

After applications are received, the potential applicants are ranked according to the information provided in the application. Interviews are then set up. The outline for the interview is as follows:

1. Brief intro to SARDI (began in 1990, conducts research and provides direct service in the areas of substance abuse and disability.). One project under SARDI is the RRTC on Drugs & Disability. There are four research activities under the RRTC (epidemiology, CAM, HIV study, and MSEP).
2. Brief intro to MSEP (The MSEP is designed to provide additional experience and educational opportunities to promising minority students who are interested in the field of rehabilitation and research.) Students will need to commit to one 2 hour seminar each week and an additional 10 hours per week. The 10 hours may include interviewing clients in the CAM program, entering data, learning how to interpret data, researching different rehabilitation topics, and writing.

3. Interview questions:

- X Please tell us why you are interested in participating in this project.
- X How do you feel your involvement with this project will help you in your future plans?
- X Are you able to fulfill the time commitment? Do you have reliable transportation? Do you plan on staying in this geographic area for the next year?
- X Please describe any experiences that you have in the areas of disability and/or substance abuse.
- X Please describe any research experience that you have.
- X This program will require writing on a regular basis. The writing may take the form of reaction papers to something that has been read or discussed; outlines of information researched; and technical papers. Please describe your interest in and ability to produce written documents.
- X Is there anything else that you would like to tell us about yourself and your qualifications for this program?

The students ultimately are chosen based on the following criteria:

1. Able to fulfill time commitment
2. Currently enrolled as a student
3. Motivation to learn about research
4. Interest in and goals somehow related to rehabilitation
5. Adequate writing skills
6. Adequate responses to interview questions (able to sell self at least adequately)

Based on experience with prior students in the MSEP, one or two Aextra@ students are selected to allow for drop outs and terminations.

ATTENTION JUNIORS AND SENIORS

ARE YOU INTERESTED IN EARNING MONEY WHILE YOU LEARN?

ARE YOU INTERESTED IN LEARNING MORE ABOUT REHABILITATION RESEARCH?

ARE YOU INTERESTED IN HAVING MORE EXPERIENCE TO INCLUDE ON YOUR RESUME OR GRADUATE APPLICATION?

IF YOU CAN ANSWER “YES” TO EACH OF THESE QUESTIONS AND ARE ABLE TO DEDICATE APPROXIMATELY 10 HOURS PER WEEK, THEN YOU MAY QUALIFY FOR A UNIQUE AND EXCITING PROGRAM.

THE **MINORITY STUDENT ENHANCEMENT PROGRAM (MSEP)** IS PART OF THE REHABILITATION RESEARCH AND TRAINING CENTER ON DRUGS AND DISABILITY AT WRIGHT STATE UNIVERSITY. THE MAJOR OBJECTIVES OF THE PROGRAM ARE AS FOLLOWS:

- TO EXPOSE STUDENTS TO REHABILITATION RESEARCH ENVIRONMENTS
- TO ENHANCE KNOWLEDGE AND SKILL DEVELOPMENT FOCUSING ON REHABILITATION
- TO FOSTER AND AUGMENT PROFESSIONAL WRITING SKILLS, WHICH WILL PERMIT STUDENTS TO BECOME MORE SUCCESSFUL PROFESSIONALS, CLINICIANS, AND GRANT APPLICANTS

WE ARE CURRENTLY SEEKING MOTIVATED JUNIOR AND SENIOR LEVEL STUDENTS TO APPLY FOR ONE OF SIX COMPETITIVE SLOTS IN THE MSEP.

SELECTED STUDENTS WILL RECEIVE:

- UP TO \$1500 PER QUARTER (CALCULATED ON AN HOURLY BASIS)
- RESEARCH EXPERIENCE AND DIDACTIC INSTRUCTION
- MENTORING FROM FACULTY
- OPPORTUNITIES FOR PRESENTING AT PROFESSIONAL CONFERENCES

FOR MORE INFORMATION:

INQUIRES SHOULD BE DIRECTED TO MR. EDDIE SAMPLE BY PHONE AT 1-800-390-2518 OR E-MAIL AT EDDIE.SAMPLE@WRIGHT.EDU

MINORITY STUDENT ENHANCEMENT PROGRAM
Student Application

Name: _____

Mailing Address: _____

Phone #: _____ Alternate #: _____

Year in School: _____ Major: _____

Please list your current classes and the times that they meet.

Please state briefly why you are interested in participating in the MSEP.

Please list up to three areas of research interest that you have related to rehabilitation or three areas of research that you would like to learn more about.

Please list the name and phone number of a faculty member from your university who can serve as a reference for you: _____

MINORITY STUDENT ENHANCEMENT PROGRAM

FACULTY MENTOR AGREEMENT

Introduction

This is an agreement entered into between the Minority Student Enhancement Program (MSEP), a part of the Rehabilitation Research and Training Center (RRTC) on Drugs & Disability which is a component of SARDI (Substance Abuse Resources and Disability Issues), Wright State University, Dayton, Ohio and the undersigned. This contract is set forth to define an agreement between these two entities and is established to describe the respective responsibilities of the parties for this arrangement.

Terms

- a. The duration of the contract shall be _____, whereupon a new agreement may be negotiated or the current agreement extended.
- b. This contract may be canceled immediately by either party for one or more of the following reasons: 1) discovery of fraud, misrepresentation, or illegal activity on the part of one of the parties; or 2) violation or breach by one of the parties of any part of this Agreement. This contract may be canceled with a minimum of 14 days notice by mutual agreement between the parties involved in this contract.

Nature of Relationship

Under the auspices of this agreement, the undersigned agrees to the following:

1. The undersigned will participate in faculty meetings for the MSEP together with RRTC staff, members of the RRTC advisory board, and other faculty mentors. These meetings will occur informally at least once per term and formally once each year. This group will review details of the program and make modifications as necessary as the program progresses.
2. The undersigned will collaborate with RRTC staff in developing ideas for new research on topics of interest to MSEP students, faculty, and RRTC staff.
3. The undersigned will have the opportunity to assist in publishing articles and materials resulting from the MSEP and will co-author articles if interested.

4. The undersigned will attend all weekly two hour seminars as assigned and will teach or co-lead at least one seminar per term. The seminars to be taught or co-lead will be assigned at the beginning of each term, and the faculty schedule for seminar attendance will also be determined at the beginning of each term.
5. The undersigned will serve as a mentor for at least one student for the time that the student is enrolled in the MSEP. Mentoring meetings will be held with the student at least one hour per week during each MSEP term unless deviations from this schedule are approved by the RRTC staff member who serves as the Program Manager for the MSEP.

Payment

For these duties, the undersigned will be compensated with a total sum of \$_____ per term for a total of three terms.

This contract contains the entire agreement of the parties and cancels or supersedes any previous understanding or agreement related to this program whether written or oral. All changes or modifications to this agreement must be made in writing between the parties.

This contract is considered a legally binding document. The parties who have caused this contract to be executed, in duplicate each of which shall be considered an original, by their signatures below duly authorize this contract.

Date

MSEP Program Manager Date

Director Date

JOB DESCRIPTION

FACULTY MENTOR

The Faculty Mentor is responsible for assisting in student development activities including but not limited to:

- X Attending weekly student seminars as assigned
- X Teaching or co-leading student seminars as assigned
- X Participating in research forums and in planning research topics
- X Meeting regularly with students to assist in the development of research materials
- X Co-authoring conference papers, articles, and grant applications
- X Assisting in writing re-mediation or other areas of student need
- X Serving as mentor for at least one student each term. This includes meeting with the student approximately one hour per week

The qualifications for the position of Faculty Mentor are:

- X A Doctoral degree in counseling, rehabilitation, human services, psychology, or other related field. (Work experience may be substituted for a terminal degree at the discretion of the MSEP administration.)
- X A minimum of 5 years teaching experience, preferably at a college level. (Other work experience may be substituted for a terminal degree at the discretion of the MSEP administration.)
- X Work experience at an Historically Black College or University is helpful.

Positions to be supervised: None

The Faculty Mentor works under the supervision of the Program Manager of the Minority Student Enhancement Program (MSEP)

Minority Student Enhancement Program

Term 1: 10 Weeks

Please note that the number of lessons is less than the number of weeks in each term. This is to account for some modifications in the seminar schedule and to allow instructors to divide lesson topics into more than one session. Supplemental and suggested additional topics are included as well.

1. Orientation To The MSEP
2. Introduction to Disability
3. Overview of Substance Abuse
4. Introduction to Rehabilitation
5. Writing & Formatting Papers in APA Style Part I
6. Writing & Formatting Papers in APA Style Part II
7. Developing a Research Topic

Minority Student Enhancement Program

Term 2: 10 Weeks

1. Conducting Literature Reviews via Periodicals and Research Databases
2. Interpreting Data in Charts and Graphs
3. Developing Poster Presentations
4. Introduction to Codebook Design
5. Introduction to Relational Databases and Database Management
6. Introduction to SPSS
7. Research Interviewing

Minority Student Enhancement Program

Term 3: Five to Ten Weeks

This term should focus on independent learning. Students and Mentors should develop Independent Learning Contracts based on individual interests and learning needs.

Minority Student Enhancement Program

Additional Lesson Topics

1. Occupations in Rehabilitation
2. Presenting Posters at Conferences and Sessions
3. Introduction to Grant Writing
4. Introduction to Cultural Diversity
5. Introduction to Questionnaire Design and Development
6. Introduction to Human Subjects Requirements
7. Critiquing Journal Articles: Advanced

SEMINAR OUTLINE

Students and faculty meet once per week in seminars throughout the course of the MSEP. The seminars are scheduled for two hours per session, generally with ten sessions per term. The number of sessions per term can vary between eight and ten sessions depending on the time available for students each term and how much time the students will be permitted during seminar time to work on various projects.

The seminars are a mandatory part of the MSEP, and this weekly meeting provides an ongoing opportunity for didactic learning and for the students and faculty to interact regularly. Although instructors may want to adjust the format occasionally, the seminars have been designed to fit the following format:

5:15pm - 5:20pm General greetings and introduction of the presenter, if unknown to the students and faculty

5:20pm - 6:20pm Didactic session

6:20pm - 6:30pm Break

6:30pm- 7:15pm Discussing and turning in assignments, signing up for the next week=s required hours, overview of the week=s assignments, questions and answers related to assignments, review of how mentoring sessions are progressing, dismissal

Minority Student Enhancement Program (Student Pretest)

Name: _____

Date: _____

PLEASE NOTE: The first part of this survey asks you a few questions concerning your knowledge and opinions about substance use and issues specific to people with disabilities. The second section asks about your confidence and experience in conducting research. This questionnaire is for the purpose of evaluating the success of the program. Your individual results will be kept confidential and will not be used to evaluate you. Please be as honest as possible in giving your responses.

For questions 1-5, using the scale below, please indicate how much you agree or disagree with each of the following statements by putting the appropriate number in front of each statement.

Strongly Disagree	Moderately Disagree	Neutral	Moderately Agree	Strongly Agree						
0	1	2	3	4	5	6	7	8	9	10

1. _____ Typically, the behaviors and symptoms associated with a disability are easily distinguished from those associated with substance abuse.
2. _____ People with disabilities are at lower risk for substance abuse or chemical dependency than the general population.
3. _____ Many people with disabilities are at high risk for alcohol, tobacco, and other drug abuse or chemical dependency.
4. _____ I understand the unique issues and patterns of substance abuse for persons with disabilities.
5. _____ The prevalence rates of substance abuse or dependence are approximately the same across different disability conditions.

The following items pertain to your current abilities in conducting research. Using the scale below, please indicate how much you agree or disagree with each of the following statements. *Please answer in terms of your ability to do each task currently, with no further training.*

Strongly Disagree		Moderately Disagree		Neutral		Moderately Agree		Strongly Agree		
0	1	2	3	4	5	6	7	8	9	10

6. _____ I feel confident that I can independently identify, locate, and access articles in scientific journals on research topics involving rehabilitation, substance abuse, and/or disability conditions.
7. _____ I feel confident in my ability to write a scientific article on a research project, using appropriate scientific style for grammar and formatting (e.g., APA style).
8. _____ I know how to create and present a report of research findings at a professional meeting.
9. _____ I am confident in my ability to gather critical data from individuals with disabilities, including establishing rapport and conducting a battery of structured interview instruments.
10. _____ I know what steps to take to identify and utilize appropriate grant funding sources in the areas of disability, rehabilitation, and/or substance abuse.
11. _____ Using raw questionnaire data, I am able to construct a database using a computer database program (such as Corel Paradox or Microsoft Access).
12. _____ I am capable of using basic techniques to analyze data with a computer statistical package (such as SPSS or SAS).
13. _____ I feel confident in my ability to understand and critique articles from scientific journals on topics related to rehabilitation, disability, and/or substance abuse.

The following items pertain to your experiences in conducting research prior to enrollment in the MSEP. Please rate each type of research activity using two categories:

(1) the number of times you have had personal experience with the activity (i.e., carried out that activity yourself) as part of the class, and

(2) the number of times you have had personal experience with the activity (i.e., carried out that activity yourself) in some other context (please explain).

Please use the space provided to comment in case you have difficulty quantifying these experiences.

<u>Part of class</u>	<u>Other context</u>	
_____	_____	14. identify, locate, and access articles in scientific journals on research topics, using a computerized literature search engine (e.g., PsychInfo, Medline)
# times	# times	
	<u>(comment):</u>	
_____	_____	15. read and interpret articles from scientific journals on topics related to rehabilitation, disability, and/or substance abuse
# times	# times	
	<u>(comment):</u>	
_____	_____	16. read and interpret articles from scientific journals on other topics
# times	# times	
	<u>(comment):</u>	
_____	_____	17. write a research paper utilizing scientific literature, with citations
# times	# times	
	<u>(comment):</u>	
_____	_____	18. write a scientific article on a research project, using appropriate scientific style for grammar and formatting (e.g., APA style)
# times	# times	
	<u>(comment):</u>	
_____	_____	19. create and present a report of research findings at a professional meeting
# times	# times	
	<u>(comment):</u>	
_____	_____	20. gather data from individuals by interviewing (i.e., face-to-face questioning, either structured or unstructured, for research or clinical purposes)
# times	# times	
	<u>(comment):</u>	
_____	_____	21. gather data from individuals by administering self-report questionnaires (i.e., handing out and monitoring paper-and-pencil forms filled out by the individual)
# times	# times	
	<u>(comment):</u>	

<u>Part of class</u>	<u>Other context</u>	
_____	_____	22. enter data into a computer program that already has a database set up
# times	# times (comment):	
_____	_____	23. construct a database from raw questionnaire data using a computer database program (such as Corel Paradox or Microsoft Access)
# times	# times (comment):	
_____	_____	24. identify and utilize appropriate grant funding sources in the areas of disability, rehabilitation, and/or substance abuse
# times	# times (comment):	
_____	_____	25. use basic techniques to analyze data with a computer statistical package (such as SPSS or SAS)
# times	# times (comment):	

Thank you very much!

Minority Student Enhancement Program Open-ended Evaluation (Student)

This is an evaluation that requests your feedback about the Minority Student Enhancement Program. Please feel free to answer the questions in as much detail as you wish (you may use additional paper).

Today's date _____

1. What is/are the most valuable thing(s) you have learned so far?

2. Name a topic(s) you feel you should have spent less time working on.

3. Name a topic(s) you feel you should have spent more time working on.

4. What topic(s) would you wish to be included in future seminars?

5. How satisfied are you with your own performance in the seminar so far?
A. Extremely satisfied B. Satisfied C. OK D. Dissatisfied E. Very dissatisfied

Please describe why you are satisfied or dissatisfied:

6. How satisfied are you with the amount of feedback provided by the staff/faculty?
A. Extremely satisfied B. Satisfied C. OK D. Dissatisfied E. Very dissatisfied

Please describe why you are satisfied or dissatisfied:

7. How satisfied are you with the availability of your faculty mentor?

A. Extremely satisfied B. Satisfied C. OK D. Dissatisfied E. Very dissatisfied

Please describe why you are satisfied or dissatisfied:

8. Do you feel you had adequate opportunity to pursue areas of your personal interest? Please explain.

9. Overall, how difficult would you rate the material covered in this quarter of the program?

A. Very difficult B. Somewhat difficult C. Difficult D. Somewhat easy E. Very easy

10. What is your opinion about the amount of time that you spent on MSEP-related work?

Below are the topics discussed this quarter in the seminar. Please use the options provided to indicate your degree of satisfaction with what you gained from each topic.

E = Excellent G = Good S = Satisfactory F = Fair P = Poor

Intro to Disability	E	G	S	F	P
Alcohol/Drugs 101	E	G	S	F	P
Intro to Outcomes in Rehabilitation Research.....	E	G	S	F	P
Writing & Formatting Papers in APA Style.....	E	G	S	F	P
Conducting Literature Reviews	E	G	S	F	P
Developing a Research Topic.....	E	G	S	F	P

Please write any comments in the space provided below and/or on the back.

Minority Student Enhancement Program

Evaluation for Faculty Mentors

This is an evaluation requesting your opinions about your experience with the Minority Student Enhancement Program. Please provide as much detail as you can. (You may use additional paper.)

Name _____ **Date** _____ **Term** A B C

1. What have you learned since your involvement with MSEP began (or since the last evaluation)?
2. Which of these has been most important to you? Why?
3. What topic do you believe was most valuable to students this term? Why?

4. What topic do you believe was least valuable to students this term? Why?

5. Overall, how difficult would you rate the material covered this term?

- | | | |
|-------------------|-----------------------|--------------|
| A. Very difficult | B. Somewhat difficult | C. Difficult |
| D. Somewhat easy | E. Very easy | |

Comments:

6. Overall, was the time allotted adequate to cover the topics and materials this term?

- | | |
|--------|-------|
| A. Yes | B. No |
|--------|-------|

Comments:

7. Has the MSEP been successful this term?

- | | |
|--------|-------|
| A. Yes | B. No |
|--------|-------|

Comments:

8. Please describe your mentoring experience this term. What would you suggest to enhance this experience for both you and your student?
9. How does mentoring impact the overall MSEP?
10. What is your opinion about the amount of time you spent on MSEP-related work?
11. Which areas/topics would you feel comfortable teaching or co-leading next term?

12. What other topics or activities would you like to have included in the MSEP?

13. What has been your most positive experience with the MSEP?

14. What has been your least favorable experience with the MSEP?

15. What suggestions or additional comments do you have about the MSEP?

Minority Student Enhancement Program Wright State University

Training Progress Report

Student_____

Faculty_____

Date_____

Reporting Period:

Fall Term () Winter Term () Spring Term () Special Attention ()

	Unacceptable	Marginal	Expected	Improving	Excelling	
1) Completion of readings as assigned						
1 2 3 4 5 6 7 8 9 10						NA
2) Weekly seminar attendance						
1 2 3 4 5 6 7 8 9 10						NA
3) Attendance/participation in weekly mentor sessions						
1 2 3 4 5 6 7 8 9 10						NA
4) Participation in weekly seminar discussions						
1 2 3 4 5 6 7 8 9 10						NA
5) Weekly (10 hrs) work assignment completed satisfactorily						
1 2 3 4 5 6 7 8 9 10						NA
6) Understanding and articulation of topics						
1 2 3 4 5 6 7 8 9 10						NA
7) Assignments completed in satisfactory and timely manner						
1 2 3 4 5 6 7 8 9 10						NA
8) Writing skills (i.e., clarity, organization of ideas, professionalism, etc.)						
1 2 3 4 5 6 7 8 9 10						NA

Training Progress Report Content

	Unacceptable		Marginal		Expected		Improving		Excelling		
9) Openness to feedback and suggestions	1	2	3	4	5	6	7	8	9	10	NA
10) Self-motivation	1	2	3	4	5	6	7	8	9	10	NA
11) Interviewing skills	1	2	3	4	5	6	7	8	9	10	NA
12) Overall rating	1	2	3	4	5	6	7	8	9	10	NA

Summary of major strength(s):

Summary of area(s) to improve:

Minority Student Enhancement Program

Instructions for Completion of the Student Training Progress Report

The following are instructions and definitions for faculty and students to understand and interpret the items and ratings presented on the training progress report.

The training progress report has been designed to evaluate and elicit constructive feedback from Faculty Mentors pertaining to students' performance. Additionally, the progress report provides students with an opportunity to rate their own performance and provide program feedback.

- Item #1:** Completion of readings as assigned. This item is used to rate the completion of all readings (i.e., has the student completed all readings which have been assigned?).
- Item #2:** Weekly seminar attendance. This item is used to rate the student's attendance at the weekly seminar meetings
- Item #3:** Attendance/participation in weekly mentor sessions. This item rates the student's attendance and active participation during weekly mentoring sessions.
- Item #4:** Participation in weekly seminar discussions. This item rates the student's active participation (e.g., answering/posing questions, insight, etc.) in weekly seminar discussion.
- Item #5:** Weekly (10 hrs) work assignment completed satisfactorily. This item rates the expectation that each student will commit/fulfill 10 hours per week to the program.
- Item #6:** Understanding and articulation of topics. This item rates how well each student is able to comprehend, summarize, and verbally communicate subject matter via seminar discussions, individual/group meetings with mentor, etc.
- Item #7:** Assignments completed in satisfactory and timely manner. This item rates how well each student meets various program deadlines with attention to detail.

- Item #8:*** Writing skills. This item rates student=s writing skills and the progress that the student is making. Specifically, the clarity, organization, and professionalism of the student=s writing are considered.
- Item #9:*** Openness to feedback and suggestions. This item rates the student=s openness to critical feedback and suggestions.
- Item #10:*** Self-motivation. This item rates the student=s motivation to explore relevant issues pertaining to disability and rehabilitation research.
- Item #11:*** Interviewing skills. This item rates the student=s interviewing skills as demonstrated through practice sessions and actual involvement in research interviewing.
- Item #12:*** Overall rating. This item rates the student=s overall performance within the program.

REFERENCES AND RESOURCES

Bosworth, K. & Hamilton, S. J., editors. (1994). Collaborative learning: Underlying processes and effective techniques. Josey-Bass Publishers: San Francisco.

Cohen, N. H. (1995). Mentoring adult learners: A guide for educators and trainers. Krieger Publishing Company: Malabar, FL.

Dortch, Jr., T. W. & the 100 Black Men of America, Inc. (2000). The miracles of mentoring. Doubleday: New York.

Wilén, W. W., editor (1987). Questions, questioning techniques, and effective teaching. National Education Association: Washington, D.C.

Zachary, L. J. (2000). The mentor=s guide. Josey-Bass, Inc.: San Francisco.

The following web sites contain useful information. The first contains AA Handbook for HP Mentors@ written by Bill Wear of the International Telementor Center. The second contains ATeaching at Stanford: An Introductory Handbook For Faculty, Academic Staff/Teaching, and Teaching Assistants@ edited by Michele Marinovich, Ph.D.

<http://www.telementor.org/hp/hp-resources/handbook.html>

<http://www-ctl.stanford.edu/teach/handbook.html>

LESSON PLANS

INCLUDED AND SUGGESTED

The following lessons were developed by SARDI staff and presented to the MSEP students. Additional lessons and materials were also used as part of the curriculum and can be found on the SARDI web site. In addition, the MSEP took advantage of the expertise of several other departments on the campus of Wright State University by requesting guest speakers to present in their areas of training and education.

For example, Wright State University has excellent library resources. Members of the library staff were able to present lessons relating to Conducting Literature Searches for our students. The information that they provided was very valuable and they were able to give students a “hands on” training as well. Another example is the Writing Center at the university. They were able to send staff members to teach the MSEP students about writing research papers in general, and focused on the APA format and style of writing. They provided each student with a “Mini APA Manual” that they crafted from the APA Manual and from additional sources.

The MSEP also took advantage of the expertise of the faculty mentors involved each year of the program. These individuals selected topics in which they had expertise and that they believed would enhance the overall education of the students. For example, one mentor conducted a session relating to the different careers that are available in the field of Rehabilitation. This lesson provided the impetus for at least one student to pursue her Master’s degree specifically in Rehabilitation. Another mentor has expertise in Cultural Diversity and was able to provide information and conduct an excellent discussion with students on this sensitive but crucial topic.

Included Lesson Plans:

- Orientation to MSEP
- Introduction to Disability
- Overview of Substance Abuse
- Introduction to Rehabilitation
- Introduction to Research Methods
- Interpreting Data in Charts and Graphs
- Poster Presentations
- Introduction to SPSS
- Introduction to Grant Writing

Suggested Topics of Additional Lessons:

- Introduction to Outcomes in Rehabilitation Research
- Writing & Formatting Papers in APA Style
- Types of Research
- Developing a Research Topic
- Introduction to Questionnaire Design
- Research Interviewing
- Introduction to Cultural Diversity
- Conducting Literature Reviews via Periodicals and Research Databases
- Introduction to Codebook Design
- Introduction to Relational Databases and Database Management
- Occupations in Rehabilitation
- Introduction to Human Subjects Requirements
- Critiquing Journal Articles: Advanced

SARDI Web Site:

<http://www.med.wright.edu/citar/sardi/>

ORIENTATION TO THE MINORITY STUDENT ENHANCEMENT PROGRAM

Purpose: The orientation process for incoming students is crucial with regard to each student's overall success within the program. The orientation provides participants with information about the mission of SARDI (Substance Abuse Resources and Disability Issues), the ongoing research within SARDI's Rehabilitation Research and Training Center (RRTC) on Drugs & Disability, and the overall purpose of the Minority Student Enhancement Program (MSEP).

Learning Objectives:

1. Participants will gain an understanding of the goals and objectives of the MSEP.
2. Participants will be able to identify what is expected of them during their involvement in the MSEP.
3. Participants will have a general understanding of how the MSEP fits within the larger mission of SARDI and within their own educational pursuits.

Key Points:

- SARDI's mission is to conduct research, provide collaborative consultation and treatment, and conduct training in the area of substance abuse and disability.
- The RRTC on Drugs & Disability is one component of SARDI.
- The MSEP falls under the umbrella of the RRTC.
- The MSEP is designed to enhance training and collaborative partnerships with minority students and faculty with the intent of improving their capacity to write successful research proposals and to conduct successful research in the area of rehabilitation.
- Another key element of the MSEP is to foster professional writing skills in both the students and the faculty.

Session Outline:

1. Welcome each new student as he or she comes in. Give each student a program “Pre Survey” and ask him or her to complete the survey at that time.
2. When the participant returns the completed survey, provide him or her with a packet that contains the MSEP Student Manual and the manual Substance Abuse, Disability, and Vocational Rehabilitation.
3. Conduct the “ice-breaker” activity.
4. Show Slides One through Three: Briefly discuss the structure under which the MSEP falls.
5. Show Slide Four: Discuss the goals and objectives of the MSEP.
6. Review the MSEP Student Manual, with an emphasis on the contract and the expectations for students in the program.
7. Show Slide Five: Explain the role of the faculty mentors.
8. Provide ample time for questions and answers.
9. Orient participants to the manual Substance Abuse, Disability, and Vocational Rehabilitation.

Session Notes:

1. Faculty begin the session by greeting each person as he or she enters the classroom. Faculty should handout the Pre-Survey and ask that the survey be completed prior to the orientation session beginning.
2. As each participant returns the survey, faculty should provide him or her with both the MSEP Student Manual and the Substance Abuse, Disability, and Vocational Rehabilitation manual. Ask the participants to begin looking through the student manual as they are waiting for others to complete their surveys.
3. When everyone has completed their surveys, the faculty member leading this session can introduce himself or herself. Next, begin the “ice-breaker” activity. Have the students

and faculty divide into groups of two. Have the dyads interview each other to learn information about each other. The interview can either be formal (with the same set of questions) or more relaxed (where the dyads can ask anything that they would like to ask). They may want to discuss their year in school, the courses they either take or teach, their major or primary professional field, why they applied for the MSEP, etc.). Give the dyads about ten minutes to complete their interviews, and then have them introduce each other to the whole group.

4. Faculty can then begin explaining the overall program to the participants. Faculty can show Slide One and review the mission of the SARDI Program. Faculty can make the following points:
 - a) SARDI (Substance Abuse Resources and Disability Issues) began in 1990 when funded by the Center for Substance Abuse Prevention to conduct a pilot project with two goals: 1) to sensitize disability professionals and alcohol and drug rehabilitation professionals to the risks for substance abuse faced by people with disabilities and 2) to begin to look at the prevalence of substance use among people with disabilities in a number of rehabilitation and school settings.
 - b) SARDI has since grown into a solid research and service delivery program funded by a number of entities.
 - c) SARDI has a number of components. One component is a chemical dependency treatment and vocational rehabilitation services program for individuals who have both a substance use disorder and a severe coexisting disability. This program is called CAM (Consumer Advocacy Model) and is located in Dayton, Ohio. CAM is based on the successful case management program at Ohio State University called the TBI (traumatic brain injury) Network.
 - d) The training program at SARDI has several projects as well. The primary training activities are state-based educational services that train counselors in both state vocational rehabilitation systems and also state alcohol and drug systems.
 - e) PALS, an award-winning model for substance abuse prevention, involves training activities based on the manual Adapting Substance Abuse and Violence Prevention Education for Youth with Disabilities. These activities serve to enhance educators' knowledge and understanding of violence, alcohol, tobacco, and other drug (VATOD) issues for youth with disabilities. PALS trains educators how to modify existing curricula to better serve the needs of their students. The project also trains key policy makers and administrators, as well as other community partners, about the importance of prevention for youth with

disabilities.

5. Next, faculty can show Slide Two and review the research being conducted by the RRTC. The following issues can be addressed:
 - a) The RRTC on Drugs and Disability is funded by the National Institute on Disability and Rehabilitation Research (NIDRR). The RRTC has several research programs running concurrently.
 - b) One research project is a nine state epidemiology study which specifically looks at the alcohol and other drug use of adults with disabilities who are receiving state vocational rehabilitation services. Another study looks at the efficacy of the CAM program and looks at program outcomes and the cost effectiveness of the program. Another study run by the RRTC is more qualitative in nature and looks at the barriers to employment faced by individuals who are living with HIV/AIDS.
6. Faculty can then show Slide Three and discuss the origins and nature of the MSEP.

Minority Student Enhancement Program (MSEP)

The Minority Student Enhancement Program (MSEP) was created with the purpose of providing minority students and faculty from local Historically Black Colleges and Universities (HBCU) with training and experience in disability issues, rehabilitation, and substance abuse research. The MSEP is funded by NIDRR to supplement SARDI's RRTC on Drugs and Disability. Wright State University is collaborating with both Central State University and Wilberforce University. Central State University and Wilberforce University share a unique and distinguished history in the state of Ohio with regards to higher education opportunities for African-Americans. Central State University represents Ohio's only publicly assisted, historically African-American institution of higher education. Similarly, Wilberforce University represents the nation's oldest private African-American university and has the sole distinction of being the first institution of higher education owned and operated by African-Americans.

Goals

The primary goal of the MSEP is to affect training and collaborative partnerships with minority students and faculty, who will thus expand their capacity as successful and productive researchers. Faculty and students will be collaborators in the efforts of the RRTC to conduct rigorous and meaningful research.

The goals for faculty mentors are as follows:

- I. Increase faculty capacity to conduct research and successfully apply for external funding.
- II. Collaborate on research in substance abuse epidemiology among people with disabilities, with a focus on African Americans.
- III. Increase the capacity of faculty members to act as mentors for minority students.

The goals for the students are as follows:

- I. Increase knowledge, skills, and experience in disability, rehabilitation, and substance abuse research.
 - II. Increase the ability of minority students to be successful professionals, researchers, clinicians, and/or grant applicants.
 - III. Foster and augment professional writing skills.
-
7. Review student expectations (e.g., total hours required per week, attendance, etc.) as outlined within the student manual.
 8. Review payment process. Remind students that we will request student compensation for completed hours once during the middle of the quarter again at the end of the quarter for remaining hours earned.
 9. Review formation of mentoring teams. Remind students that initially, they are assigned a faculty-mentor based on research interests and location. However, as a resource, students are not limited to one faculty-mentor. Students are encouraged to establish professional contact with other faculty-mentors within the program.
 10. Wrap-Up: Discuss other issues specific to students scheduling a time to meet with their faculty mentor for a weekly meeting to discuss progress and other program issues. Additionally, students should meet with the program manager to discuss weekly hours to fulfill research activities.

MISSION OF SARDI

SARDI's mission is to conduct research, provide collaborative consultation and treatment, and conduct training on the intersection between substance abuse and disability conditions. The program considers all physical, cognitive and emotional disabilities and their correlations with substance abuse. SARDI also investigates disability issues arising as sequellae of substance abuse. Currently SARDI encompasses a number of state and federally-funded entities.

THE RRTC ON DRUGS AND DISABILITY

The Rehabilitation Research and Training Center on Drugs and Disability (RRTC), funded by the National Institute on Disability and Rehabilitation Research (NIDRR), addresses substance abuse issues among individuals qualifying for vocational rehabilitation services. Collaborative sites include the Miami Valley Hospital, New York University, Ohio State University, and the Rehabilitation Institute of Chicago.

MSEP OVERVIEW

The Rehabilitation Research and Training Center (RRTC) on Drugs and Disability, funded by the National Institute on Disability and Rehabilitation Research, addresses substance abuse issues among individuals qualifying for vocational rehabilitation services.

In the fall of 1998, the RRTC applied for and received supplemental funding for the enhancement of minority students via collaborative relationships with predominately minority academic institutions.

MSEP GOALS AND OBJECTIVES

The major goals of the program are two-fold:

- For students, this program will enhance training and collaborative partnerships with minority students and faculty. Thereby, expanding their capacity as successful, productive researchers. Furthermore, students will be collaborators in the efforts of the RRTC to conduct rigorous and meaningful research.
- For the RRTC, this partnership would benefit the collaborating institutions through the development of skills and experience in disability, rehabilitation, and substance abuse research by students.

The objectives of the program are:

- to expose students to rigorous rehabilitation research environments
- to enhance specific areas of knowledge and skill development focusing on disability and substance abuse; and
- to foster and augment professional writing skills, which will permit students to become more successful professionals, clinicians, and grant applicants.

INTRODUCTION TO DISABILITY

Purpose: This session introduces the participants to disability, including substance abuse as a category of disability. Participants will learn definitions of disability, and explore myths and facts about disability through a variety of activities. Participants will also have an opportunity to begin to examine their own attitudes about disability and how those attitudes can affect their ability to interact with persons with disabilities.

Learning Objectives:

1. Participants will be able to discuss how attitudes about disability influence the way a person reacts to people with disabilities.
2. Participants will be able to list four classifications of disability.
3. Participants will be able to list at least five functional impairments that can occur due to a disability.
4. Participants will be able to describe how substance abuse can be categorized as a disability.
5. Participants will be able to describe how they can modify their own attitudes about disability.
6. Participants will begin to explore the impact that disability could have on their lives both personally and as professionals.

Key Points:

- There are over forty-nine million Americans with disabilities. Disabilities occur in every racial, ethnic and economic segment of the population, and people with disabilities are a large and diverse minority group.
- Disabilities can be classified as physical, cognitive, sensory, or affective and limit an individual's ability to function in various aspects of life such as reading, learning, and mobility.

- Almost everyone has had some type of experience with disability, and these experiences vary widely. Some experiences are positive and some are negative – just as experiences are with people who do not have disabilities.
- People with disabilities are not “those” people, but are friends, family members, professionals, and ourselves. People with disabilities and non-disabled people have many more similarities than differences. Recognizing and acknowledging our commonalities is important in challenging the misperceptions about people with disabilities.
- Personal and societal attitudes, beliefs, and misperceptions about disability and substance abuse may interfere with the ability to provide appropriate treatment services to people with disabilities.
- People with disabilities frequently are “experts” on their own conditions and how disability impacts their daily living. One of the best ways to learn how a disability affects someone is to ask that individual.
- In many cases, substance abuse as a primary disability or as a coexisting disability is addressed under the Americans with Disabilities Act and the vocational rehabilitation system.
- Personal attitudes about disability may interfere with the ability to provide appropriate services to people with disabilities.
- Societal attitudes, beliefs, and general myths about disability impact the services that people with disabilities receive.
- There are differences in the way we think we could cope with personal disability and how we would cope with a disability that someone else has.

Session Outline:

1. Conduct “Disability Stories” activity.
2. Show Slide One through Six in order: Discuss some of the definitions of disability and other terms associated with disability.
3. Conduct the “Personal Attitudes” activity using any or all of Slides Seven through Eleven.
4. Show Slides Twelve through Nineteen: Discuss the myths and facts associated with various disabilities.

5. Show Slide Twenty: Discuss substance abuse as disability.
6. Conduct the “Pick a Disability” activity.
7. Conclude by reviewing the Key Points and resources for learning more about disability.

Session Notes:

1. Faculty will begin this session by explaining that almost everyone has had some type of experience with disability and that one of the best ways we can be respectful of disability is to learn as much as we can about it. The faculty then explains to the participants that we will begin the process of discussing disability by describing an experience that we each have had with disability. Explain to the participants that the experience can be positive, negative, or neutral. A faculty member should begin this activity. If possible, the faculty may want to share an experience about a disability that may not normally be thought of by the participants such as diabetes, attention deficit disorder, substance abuse, or other “hidden” disabilities.
2. Faculty will then provide an overview of disability, including information from the World Health Organization.
 - a) Diseases, disorders, and injuries have various effects on the body and its systems. This is true if the diseases, disorders, or injuries occur at birth or later in life. These conditions, such as multiple sclerosis, traumatic brain injury, diabetes, and mental retardation, can lead to impairments. Some examples of impairments are reduced cognitive functioning, paralysis, blindness, and muscular weakness.
 - b) Impairments can become disabilities. Disabilities limit an individual’s ability to function in one or more areas of his or her life such as reading, walking, learning, and speaking.
 - c) Often these terms are used interchangeably, and different groups define disability differently in order to meet their function as a group. For example, the Vocational Rehabilitation definition of disability focuses on impediments to employment and whether or not vocational services appear likely to assist a person in obtaining employment.
 - d) The Americans with Disabilities Act (ADA) definition focuses on limitations in one or more major life activities, but also includes a history of an impairment or the belief by others that a person has an impairment.

- e) There are four categories of disability: physical impairments, cognitive impairments, sensory impairments, and affective impairments.
 - f) People with the same disability may not have the same functional limitations or impediments to employment. The seven categories of functional limitation and capacity are as follows: Self-Care, Mobility, Communication, Learning, Problem-Solving, Social Skills, Executive Function.
3. The faculty will next explain that often our attitudes and beliefs about disability impact our ability to understand disability. Let the participants know that the next activity will allow them to begin to explore some of their attitudes about disability and about some life situations in general. Five cards should be posted around the room, allowing space for movement to the area around each card. Each card has one of the following words/phrases written on it: Strongly Agree; Agree; Neutral; Disagree; Strongly Disagree. The faculty can choose any or all of the five scenarios. Faculty will read one situation aloud and ask the participants to move to the area labeled with their level of agreement with the statement. Participants are then asked to explain their reasons for their choices. After some discussion, a new situation is read and the participants again move to the area which is labeled with their level of agreement. Participants are then asked to explain their reasons for their choices for this situation. Faculty may need to play “devil’s advocate” in order to get some discussion going. For example, if all of the participants choose “agree” to a situation, the faculty may want to choose “disagree” and provide information that someone with that opinion may have.
 4. Next the faculty will discuss the different myths that are still prevalent and facts about disabilities. Using the overheads, faculty can display first the myth and ask for responses. Then the fact can be revealed and used as the starting point for further discussion about misperceptions related to disability and the impact that these beliefs might have when interacting with a person with a disability.
 5. Faculty will tell participants that the Americans with Disabilities Act of 1990 was a big step toward improving the access that people with disabilities have to society. The ADA does provide some protection to people who have substance abuse problems. Faculty can review the information about the protection that the ADA can provide to some people with substance abuse as well as the progress that vocational rehabilitation service providers have made in this area.
 6. Next, faculty can hand out the “Pick a Disability” activity sheet, and explain to participants that they have a total of five minutes to complete this activity. The participants will need to indicate the disability that they would most like to have if they had to choose and the disability that they would least like to have. After five minutes, discuss the choices that they made as a group. Determine if there are differences between

the disabilities that were chosen among the participants. Have a similar discussion relating to the disabilities that the participants would least like to have.

7. Faculty should summarize the session by reviewing the Key Points and by asking the participants where they may be able to learn more about disability and how they may be able to change some of their negative attitudes or misperceptions about disability. Be certain that participants consider people with disabilities as one source for learning more information.

REFERENCES

Books

Substance Abuse and Mental Health Services Administration (SAMHSA). (1998). Substance Use Disorder Treatment for People with Physical and Cognitive Disabilities: Treatment Improvement Protocol (TIP) Series 29. DHHS Pub. No. (SMA) 98-3249. Washington, DC: U.S. Government Printing Office.

World Health Organization. International Classification of Impairments, Disabilities, and Handicaps: A Manual of Classification Relating to the Consequences of Disease. Geneva: World Health Organization, 1980.

Web Sites

The Center for Disability Information & Referral can be found at:

<http://www.iidc.indiana.edu/~cedir/>

The Research & Training Center on Independent Living at the University of Kansas can be found at:

<http://www.rtcil.org/RTCIL.HTM>

The National Institute on Disability and Rehabilitation Research can be found at:

<http://www.ed.gov/offices/OSERS/NIDRR/>

DISABILITY DEFINITIONS

Disease, Disorders, Conditions, Injuries = Impairments

Impairments = Disabilities

Impairment: Any loss or abnormality of psychological, physiological or anatomical structure or functions.

Disability: Any restriction or lack (resulting from an impairment) of the ability to perform an activity in the manner or within the range considered normal for a human being.

Source: World Health Organization, 1980

VOCATIONAL REHABILITATION DEFINITION OF DISABILITY

Individual with a disability means any individual who ...

1. Has a physical or mental impairment that, for that individual, constitutes or results in a substantial impediment to employment;
AND
2. Can benefit in terms of an employment outcome from vocational rehabilitation services provided under Titles I, III, VI, or VIII of the Rehabilitation Act.

AMERICANS WITH DISABILITIES ACT

DEFINITION OF DISABILITY

The ADA defines a person as having a disability if one of the following is met:

1. Has a “physical or mental impairment that substantially limits one or more of the major life activities of such individual,”
2. Has a “record of such impairment,” or
3. Is “regarded as having such an impairment.”

CATEGORIES OF DISABILITY

The World Health Organization classifies disabilities into four main categories:

- Physical impairments (spinal cord injury)
- Sensory impairments (blindness or deafness)
- Cognitive impairments (learning disabilities, memory problems)
- Affective impairments (major depression, post traumatic stress disorder, eating disorders)

DISABILITY CHART

CATEGORY	DISABILITY	
<i>Physical</i>	Spina bifida	Spinal cord injury
	Amputation	Diabetes
	Chronic fatigue syndrome	Carpal tunnel
	Arthritis	
<i>Cognitive</i>	Learning disability	Traumatic brain injury
	Mental retardation	Attention deficit hyperactivity disorder
<i>Affective</i>	Depression	Bipolar disorder
	Schizophrenia	Eating disorder
	Anxiety	Post traumatic stress disorder
<i>Sensory</i>	Blindness	Deafness
	Visual impairment	Hard of hearing

Source: Substance Use Disorder Treatment for People with Physical and Cognitive Disabilities: Treatment Improvement Protocol (TIP) Series 29.

SEVEN CATEGORIES OF FUNCTIONAL CAPACITY AND LIMITATION

1. Self- care: eating, grooming, dressing
2. Mobility: walking, use of stairs, use of wheelchair
3. Communication: reading, writing, speaking
4. Learning: attention, comprehension, retention
5. Problem-solving: awareness of problem, ID of possible solutions
6. Social skills: impulse control, intimacy, empathy
7. Executive functions: planning, organizing, decision-making

ATTITUDE ACTIVITY: SCENARIO 1

A father and his 16 year old son are out fishing in the middle of the lake. It is a very hot day, and they are thirsty. When they look in the cooler, they discover that the soda was left back on the dock, and they only had beer in the cooler. Both are very hot and thirsty, but to go back to the dock would take a long time. The father offers his son a beer.

Do you agree with this decision?

ATTITUDE ACTIVITY: SCENARIO 2

A woman who is quadriplegic has just returned to the United States from two years in Holland where it is legal to own and consumer marijuana for personal use. She believes that smoking marijuana relieves the severe muscle spasms that prescription medications cannot alleviate. The physician who treated her in Holland approved of her use of marijuana to relieve muscle spasms. She reports no social or personal consequences from this use. She decides to continue obtaining and using marijuana.

Do you agree with this decision?

ATTITUDE ACTIVITY: SCENARIO 3

A young man became quadriplegic in a fight while he was in high school. He is now in college, living in an apartment. He needs attendant care, but he is having difficulty keeping reliable attendants. His friends are willing to help him with his daily care needs if he supplies them with marijuana or cocaine while they are helping him. The young man buys drugs and uses them with his friends in order to obtain the care he needs.

Do you agree with this decision?

ATTITUDE ACTIVITY:

SCENARIO 4

When he was a young adult, a man became paralyzed in an accident. He was very depressed and had difficulty getting out of his home to socialize, work, or attend school. He was becoming very isolated from others including most of his family. He relaxed and seemed happier and more social when he smoked marijuana. Although his mother was morally against the use of illicit drugs, she was glad that her son was able to find something that made him willing to talk to her. He told his mother where she could purchase marijuana for him, and after some hesitation, his mother bought the marijuana.

Do you agree with this decision?

ATTITUDE ACTIVITY: SCENARIO 5

A fourteen year old girl with spina bifida who uses a wheelchair for mobility is caught by the assistant principal smoking outside the junior high building just before school. Years ago, school administration banned smoking by students on school property. Many school-aged smokers congregate in a field adjacent to school grounds on the far side of a loose gravel road. The girl with spina bifida was smoking on school property right next to the gravel road. She claimed (and it was true) that she could not nor could her friends manipulate her wheelchair across the road. The assistant principal pursued a 10 day suspension for smoking on school grounds.

Do you agree with the assistant principal's decision?

MYTHS AND FACTS

Blindness and Visual Impairment

MYTH: People who are blind can feel and hear things that no one else can; they have a sixth sense.

FACT: Certain senses can become more highly developed because people who are blind rely on them more. There is nothing mystical about this phenomenon.

MYTH: Blindness means living in a world of darkness.

FACT: What is seen depends upon the age of onset, degree of visual memory, and degree of usable vision regarding light, shape, etc.

MYTH: All people who are blind can read Braille.

FACT: Only about 10% read Braille, but there are many other assistive devices which promote independence. These include listening aids, reading aids, and mobility aids such as canes and guide dogs.

MYTHS AND FACTS

Hidden Disabilities

(Cancer, Epilepsy, Lung Disease, Heart Disease, etc.)

MYTH: Insulin cures diabetes.

FACT: There is no cure diabetes, but insulin combined with exercise and diet can result in productive and healthy living in spite of diabetes.

MYTH: Hidden disabilities, such as emphysema or cystic fibrosis, are contagious.

FACT: Hidden disabilities are generally not contagious, even those accompanied by respiratory problems like coughing or wheezing. Segregation makes the person feel abnormal and increases misunderstanding of the disability.

MYTHS AND FACTS

Hidden Disabilities

(Cancer, Epilepsy, Lung Disease, Heart Disease, etc.)

MYTH: All people with cancer are dying.

FACT: Cancer is a large group of diseases characterized by uncontrolled growth and spread of abnormal cells. More than one-third of all people with cancer today are completely cured, and others are living with cancer, not dying of it. (This same attitude is now slowly becoming popular in the HIV/ AIDS arena, where HIV is no longer seen as a death sentence but as a long term manageable illness.)

MYTH: People with epilepsy are likely to have seizures at any time.

FACT: Over 2 million Americans have seizure disorders and the overwhelming majority are controlled by medication. Many seizure episodes are as mild as blinking or brief lapses of attention.

MYTHS AND FACTS

Traumatic Brain Injury

MYTH: Brain damage is permanent and irreversible.

FACT: There is a period of spontaneous neurological recovery of about two years in which significant improvements can often be seen. These are sometimes augmented by extensive and expensive rehabilitation methods.

MYTH: Individuals with TBI are volatile, aggressive, and unpredictable.

FACT: Almost all people who have experienced severe TBI pass through a phase of agitation during their recovery. This is normal and should not be confused with a psychiatric condition. Behavioral problems which do linger for a minority of people with TBI will likely include confusion and/or perseveration as opposed to aggressiveness.

MYTH: Individuals with TBI experience dramatic losses of intellectual functioning.

FACT: There is usually some loss of intellectual functioning, but this is often confused with cognitive deficits such as problems in attention, concentration, short term memory, or information processing which are often significant impediments to long term recovery.

MYTHS AND FACTS

Mobility Impairment

MYTH: All wheelchair users are paralyzed and are “confined” to their wheelchairs.

FACT: Many wheelchair users can walk with other mobility aids. Their speed, range, and convenience of movement are enhanced by wheelchair use. Wheelchairs have liberated those who need them, not confined them.

MYTH: All wheelchair users need attendant care.

FACT: People use wheelchairs for a variety of reasons. Many wheelchair users are able to transfer without assistance and can perform their daily living tasks without the assistance of others. Other wheelchair users may rely on attendant care for some activities of daily living.

MYTHS AND FACTS

Attention Deficit Disorder

MYTH: People with ADD have intellectual deficits.

FACT: Although there are exceptions, most people who have ADD are of average or above average intelligence.

MYTH: ADD is the same as learning disability.

FACT: These two disabilities can co-exist, but each have different symptoms. ADD is characterized by an inability to focus attention or control aspects of behavior. It can be accompanied by hyperactivity. LD relates to specific developmental disorders associated with learning.

MYTH: People outgrow ADD by the time they reach adulthood.

FACT: Approximately one-third or more of people with ADD experience continuing problems into adulthood. Ritalin, once taboo for those over 18 years of age, is now being used to treat adult ADD.

MYTHS AND FACTS

Deafness and Hearing Loss

MYTH: Hearing aids can correct hearing loss.

FACT: Hearing aids can improve hearing for some people. Hearing aids are not corrective devices, rather they lessen the severity of hearing loss.

MYTH: All people with hearing loss can read lips.

FACT: Some individuals with hearing loss receive training in lip-reading. However, lip-reading is an imperfect process, only between 30% - 40% accurate, and is seldom used as a sole means of communication.

MYTH: People who are deaf use one system for communicating.

FACT: In the U.S. people who are deaf use a variety of communication methods, usually in combination. These methods include American Sign Language, speaking, speech-reading, writing, and other manual communication.

MYTHS AND FACTS

Substance Abuse

MYTH: All people who abuse substances are chemically dependent.

FACT: It is not unusual for some people to experience episodes of substance abuse, yet not become dependent. For example, situational periods of abuse related to divorce or personal crisis are not uncommon.

MYTH: All people who are diagnosed with substance dependence benefit from involvement in either Alcoholics Anonymous or Narcotics Anonymous.

FACT: Recently, other alternatives for sober support have been studied. Some people have difficulty with the concepts of the twelve step programs – either spiritually or cognitively, for example. Many of these individuals do become sober utilizing other support systems.

SUBSTANCE ABUSE AS A DISABILITY

The ADA:

- protects people with alcoholism, even if they are currently using alcohol
- excludes from protection people who are currently using illegal drugs
- protects former abusers who have successfully completed treatment

Vocational Rehabilitation Programs:

- are beginning to recognize substance abuse as a primary and as a co-existing disability
- recognizes a number of functional limitations that are associated with chemical dependency
- recognizes that these limitations can continue even after sobriety is obtained

PICK A DISABILITY

You are going to wake up tomorrow morning with a disability. You are lucky because you have the opportunity to choose the disability! The only rules are that you cannot choose a disability that you already have, and you are not allowed to choose "none." Choose the disability which you believe you would best be able to cope with. Which disability would you least be able to cope with? What other factors impacted your choice?

Deafness: Profoundly deaf with no residual hearing. You do not know American Sign Language or any other manual communication methods at this time.

Blindness: Limited residual vision and can distinguish some shapes in bright light. The chances are that even this vision will diminish over time.

Attention Deficit Disorder: Severe limitations associated with this disorder. Will need to take medication which should alleviate some of the symptoms. However, will still have difficulty succeeding in work due to lack of ability to concentrate.

Paraplegia: Utilizes wheelchair and needs some attendant care. In good health other than recurring urinary tract infections which require medication and periodic hospitalizations.

Seizure Disorder: Frequent grand mal seizures. Need to utilize safety features such as wearing a protective helmet when away from home. Seizures mostly under control with medication at this time.

Mental Retardation: In the mild range of retardation. Looks "normal" and is in good health. Will have difficulty understanding limitations.

Drug Addict: In recovery for approximately six months. Has history of risky behavior including IV drug use. Has had some legal trouble, but no felony arrests. Alienated from family.

LESSON ON DISABILITY

You are responsible for preparing a 10 minute lesson on one of the following disability categories: mental illness, spinal cord injury, traumatic brain injury, deafness and hearing loss, respiratory disorders, blood serum disorders, mental retardation, speech and language impairment, and blindness and visual impairment. Construct your presentation based on the following outline. Each presentation will be copied for others in the seminar.

- I. Incidence and Prevalence
- II. Etiology
- III. Potential Limitations
- IV. Prevention
- V. Prognosis
- VI. Citations

OVERVIEW OF SUBSTANCE ABUSE

Purpose: This session provides an introduction to the field of substance abuse, including the impact of substance abuse on society and general facts about alcohol and other drugs. The disease model of substance abuse will be presented as well as information on addiction, risks and consequences, criteria for diagnosis, and treatment options.

Learning Objectives:

1. Participants will gain an understanding of the ways that substance abuse impacts all divisions of society.
2. Participants will be able to list at least three reasons why a person may choose to start drinking and three reasons why a person may choose to use illicit drugs.
3. Participants will be able to describe the continuum between use, abuse, and dependency.
4. Participants will be able to list at least three characteristics that make chemical dependency classified as a disease.
5. Participants will be able to discuss at least one consequence of chemical dependency in each of the life areas.

Key Points:

- Substance abuse has an impact on all facets of our society and its effects are felt by individuals of every economic, ethnic, racial and educational background and by their communities.
- People use alcohol and other drugs for a variety of reasons.
- Some individuals who use alcohol or other drugs experience negative consequences in one or more of their life areas.
- Chemical addiction or dependency is a disease and has a specific set of characteristics that may include physical dependence, psychological dependence, or both.

- Understanding the DSM-IV Criteria for Substance Abuse and Dependency is useful when interacting and working with persons with chemical dependency issues.
- There are numerous treatment options for people who are experiencing problems with their use of alcohol and other drugs. Many of these treatments are designed to teach people how to become abstinent from all substances. Other programs teach individuals to effectively manage their use of alcohol and other drugs.

Session Outline:

1. Have participants quickly write down the key words or phrases that describe an alcoholic. Then do the same with drug addict. Discuss responses.
2. Discuss some of the historical views of chemical dependency and the treatment of substance abusers.
3. Show Slide One: Discuss the facts about alcoholism listed.
4. Have participants list as many different drugs as they can think of and then have them list as many reasons for using the different drugs as they can think of.
5. Handout “Some Negative Consequences of Substance Abuse and Dependency” and discuss the life areas and potential consequences in each.
6. Show Slide Two: Discuss the continuum of use.
7. Show Slide Three: Discuss the definitions of terms that relate to chemical dependency as a disease.
8. Handout the DSM-IV criteria for diagnosing substance abuse and substance dependence and discuss.
9. Show Slide Four: Discuss some of the different treatment options available to people who have problems.

Session Notes:

1. The faculty begin the session by acknowledging that virtually all of us have had some experience with substance abuse, whether it's having alcoholism in our own family, a best friend whose sister was addicted to pain medications, or a college classmate who was arrested for drug possession.
2. Faculty should ask students to quickly write down a description of what they picture when they think of an alcoholic. Have them quickly do the same for a drug addict. Discuss their responses by prompting with questions such as: What gender did you picture? What race? What age?
3. Ask the participants to discuss how they believe alcoholism and drug addiction was viewed in the past. Include the beliefs or perspectives that follow:
 - a) Moral weakness: alcoholics were viewed as "bad people"
 - b) Lack of willpower: alcoholics were viewed as having no control over themselves or their actions
 - c) Mental illness: alcoholics were viewed as being emotionally unstable and unable to face life
 - d) Physical sickness: alcoholics were viewed as sick
 - e) Spiritual sickness: alcoholics were viewed as associated with the devil or things unholy
4. Ask the participants to discuss how society has reacted to or dealt with the problems of chemical dependency. Include the following: Isolation, Institutionalization, Medication, and Prohibition.
5. Faculty can then review the information relating to facts about alcoholism and chemical dependency on Slide One and ask for participants' reactions.
6. Next, faculty can ask participants to brainstorm and list as many different drugs as they can on the chalkboard or on their own paper. Give them only a few minutes to complete this task. (Faculty should make certain that a variety of types of alcohol, over-the-counter drugs, prescription medications and illicit drugs are on the list.)
7. The faculty then asks the participants to discuss the various reasons why people might use these different substances. (Faculty should make certain that some of the reasons listed include to cure or treat an illness or condition, to socialize or relax, as part of a ritual such as the use of wine at a church service, to fit in with a group, etc.)
8. The faculty can then ask the participants to name the different aspects of a person's life or the life areas. These are: social, family, legal, financial, work or school, medical, and

emotional. Have the participants brainstorm and list as many negative consequences of substance abuse and dependency as they can think of and write them on the board or overhead. Then present the handout “Negative Consequences of Substance Abuse and Dependency” and briefly review the consequences that the participants did not already list.

9. Faculty can then show Slide Two, discuss the different stages, and provide the following information:
 - a). For some individuals, the use of substances may be an occasional or social activity that does not result in negative consequences. For others, the use of substances may be a way to cope with problems or with life in general. For still others, the use of alcohol and other drugs may advance to substance abuse or dependency. Understanding this continuum is important when interacting with someone with a substance abuse issue.
 - b). Many people choose not to use alcohol or other drugs at all (except for prescribed medications). Some use alcohol or other drugs occasionally or socially and do not suffer harmful consequences as a result. For others, the use of substances may be a way to cope with problems or with life in general. And for some, the use of alcohol and other drugs may advance to substance abuse or dependency.
 - c). Chemical dependency generally doesn’t happen very quickly. It progresses over time and the consequences tend to worsen over time. Often the person is unaware of the subtle changes in their progression.
10. Faculty can then show Slide Three and discuss the terminology related to chemical dependency and substance abuse.
 - a). A person has developed **physical dependence** on a drug when going without it results in illness, commonly flu-like symptoms known as withdrawal symptoms. Physical dependence is often preceded or accompanied by tolerance, when a person’s continuous use of a drug over a period of time causes larger amounts of the drug to be taken in order to achieve the desired effect. (Some people can have a genetic tolerance, as evidenced by not being as affected by alcohol as are other people, even before beginning regular consumption of alcoholic beverages. For most people, however, tolerance is “learned” through practice.)
 - b). **Psychological dependence** is demonstrated when a person craves a drug intensely and becomes extremely distressed if it is not available. In either case the addict has inconsistent control over his/her use of the drug and is preoccupied with getting it and using it.

- c). The American Medical Association has called Chemical Dependency a disease because it is primary (it has its own genetic, psychological and environmental factors influencing its development and manifestations), progressive (it tends to worsen over time), chronic (there is no “cure”), and often fatal.
 - d). **Primary** refers to the nature of alcoholism as a disease entity in addition to and separate from other pathophysiologic states which may be associated with it. "Primary" suggests that alcoholism, as an addiction, is not a symptom of an underlying disease state.
 - e). **Disease** means an involuntary disability. It represents the sum of the abnormal phenomena displayed by a group of individuals. These phenomena are associated with a specified common set of characteristics by which these individuals differ from the norm, and which places them at a disadvantage.
 - f). **Often progressive and fatal** means that the disease persists over time and that physical, emotional, and social changes are often cumulative and may progress as drinking continues. Alcoholism causes premature death through overdose, organic complications involving the brain, liver, heart and many other organs, and by contributing to suicide, homicide, motor vehicle crashes, and other traumatic events.
 - g). **Impaired control** means the inability to limit alcohol use or to consistently limit on any drinking occasion the duration of the episode, the quantity consumed, and/or the behavioral consequences of drinking.
 - h). **Preoccupation** in association with alcohol use indicates excessive, focused attention given to the drug alcohol, its effects, and/or its use. The relative value thus assigned to alcohol by the individual often leads to a diversion of energies away from important life concerns.
 - i). **Adverse consequences** are alcohol-related problems or impairments in the life areas.
 - j). **Denial** is used here not only in the psychoanalytic sense of a single psychological defense mechanism disavowing the significance of events, but more broadly to include a range of psychological maneuvers designed to reduce awareness of the fact that alcohol use is the cause of an individual's problems rather than a solution to those problems. Denial becomes an integral part of the disease and a major obstacle to recovery.
11. Faculty can then hand out and review the DSM-IV Criteria for diagnosing Substance Abuse and Dependency. When discussing the DSM criteria, make sure to emphasize the

distinction between abuse and dependency. Tolerance and withdrawal are generally considered the two most significant indicators of dependency. Although the participants may not be required to make formal diagnoses, a working knowledge of diagnostic criteria can be helpful for understanding or determining treatment plans.

12. Using the overhead “Common Substance Abuse Treatment Options,” faculty can briefly discuss some of the treatment options available to substance abusers.
 - a). **Short-term Inpatient Treatment.** An intensive, structured three- to six-week stay at a facility, sometimes followed by periodic contact with a healthcare professional for up to two years. Components often include: self-help sessions with other users; classroom-type lectures to teach facts about drugs and addiction; individual, family and group therapy; medical or psychiatric treatment, if necessary.
 - b). **Long-term Residential Treatment.** For persons who have severe problems including major problems with family, work or school responsibilities due to use. Involves 24-hour, highly-structured care for six to twelve months. Components often include: peer-led group meetings, life skills instruction; individual, family and group therapy; medical or psychiatric treatment, if necessary; strict rules and regulations; a privilege system that provides rewards for progress.
 - c). **Outpatient Methadone Treatment.** Usually used for heroin addicts and centers on using certain medications to block the craving for heroin. Addicts can live at home, but have to periodically visit a facility for treatment. This type of treatment can last indefinitely. Components often include: daily visits to a facility where staff oversees medication administration; regular drug-testing; individual or group therapy sessions; medical or psychiatric treatment, if necessary.
 - d). **Outpatient Drug-Free Treatment.** Generally for people with jobs or strong social support systems. User can live at home, but has to periodically visit a facility for treatment. These programs, which vary greatly in structure, can last from three to six months. Components often include: one to two weekly visits to facility; drug testing; group therapy sessions; medical or psychiatric treatment, if necessary.
 - e). **Self-Help Support Groups.** Technically, support groups are NOT considered “treatment”. These groups are run entirely by the group members and not professionals. Users in recovery and users wanting to begin recovery meet on a regular basis to share experiences and provide support to one another in staying clean. Alcoholics Anonymous and Narcotics Anonymous are examples of this type of group.

13. Faculty can conclude this session by asking participants to discuss what they learned from this session. Ask questions such as: “What are some ideas that people have had in the past about the how’s and why’s of alcoholism and drug addiction?” and “How do these beliefs and stereotypes influence our ability to provide services to or conduct research with people who are substance abusers?”

REFERENCES

Books

American Psychiatric Association: Diagnostic and Statistical Manual of Mental Disorders, 4th ed. Washington, DC, APA, 1994.

Web Sites

Recovery Central Resources for Dependency and Addiction Recovery can be found at:

<http://www.recoverycentral.org/>

The American Psychiatric Association (APA) Clinical Resources can be found at:

http://www.psych.org/clin_res/index.cfm

The Centers for Disease Control and Prevention can be found at:

<http://www.cdc.gov>

The National Clearinghouse for Alcohol and Drug Information can be found at:

<http://www.health.org>

The National Institute on Alcohol Abuse and Alcoholism can be found at:

<http://www.niaaa.nih.gov>

The National Institute on Drug Abuse can be found at:

<http://www.nida.nih.gov>

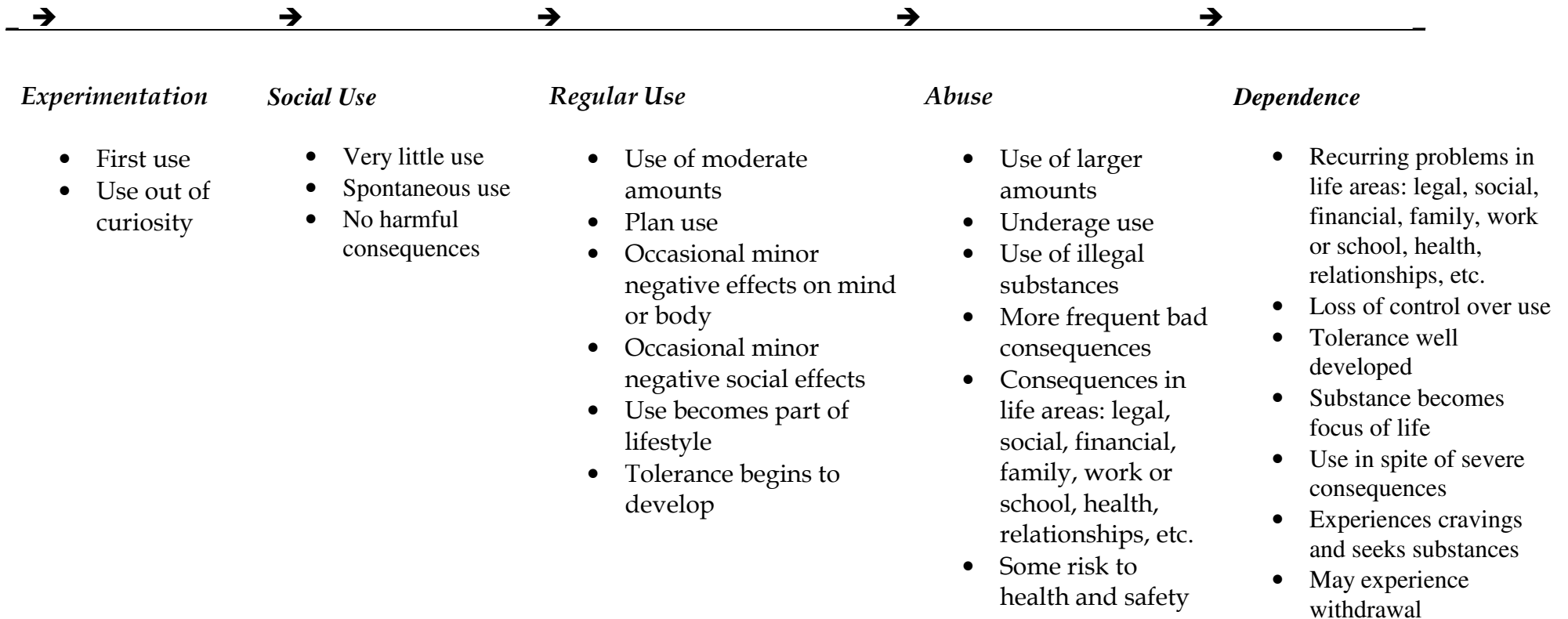
The Office of Minority Health Resource Center can be found at:

<http://www.omhrc.gov>

FACTS ABOUT ALCOHOLISM AND SUBSTANCE ABUSE

- Alcohol is the most widely used and abused drug in America.
- Each year, drug- and alcohol-related abuse kills more than 120,000 Americans, and costs taxpayers approximately \$276 billion annually in preventable health care costs, extra law enforcement, auto crashes, crime and lost productivity.
- Alcohol-related crimes in the United States account for 54 percent of murders and attempted murders, 68 percent of manslaughters, 52 percent of rape/sexual assaults, and 48 percent of robberies.
- Because their mothers drink during pregnancy, 40,000 babies are born each year with birth defects from alcohol abuse. Mothers who use other substances such as cocaine drive this number up even further.
- In families with one alcoholic parent, the child is 34 percent more likely to be alcoholic than children of non-alcoholics.
- Alcoholism is one of the most preventable illnesses; yet 7 out of 10 adults drink alcohol. Of these, one out of seven is an alcoholic.

CONTINUUM OF USE, ABUSE, DEPENDENCY



CHEMICAL DEPENDENCY AS A DISEASE

Physical dependence

Psychological dependence

Primary

Chronic

Often progressive and fatal

Impaired control

Preoccupation

Adverse consequences

Denial

COMMON SUBSTANCE ABUSE TREATMENT OPTIONS

Short-term Inpatient Treatment

Long-term Residential Treatment

Outpatient Treatment

Outpatient Drug-Free Treatment

Self-Help Support Groups

Some of the Negative Consequences of Substance Abuse and Dependency

SOCIAL

Poor Communication
Bad Reputation
Paranoia
Change in Activities

Loss of Friends
Loss of Social Skills
Change in Friends

Defensive
Arguing
Secretive

FAMILY RELATIONSHIPS

Arguments
Estranged in Family
Neglect of Obligations
Misunderstanding
Poor Role Modeling

Change in Roles
Loss of Respect
Separation
Physical Abuse
Sexual Abuse

Change in Sex Life
Hiding Use
Mistrust
Verbal Abuse

WORK AND SCHOOL

Increase in Sick Days
Poor Productivity
Endangering Others

Poor Hygiene
No Promotion
Poor Reputation

Expelled, Fired
No Raise
Suspension

MEDICAL

Weight Problems
Bowel Problems
Other Infections
Heart Problems
Liver Problems
Rapid Aging
Using Against Medical Advice

Ulcers
Poor Nutrition
Traumatic Injuries
Lung Problems
Nausea
Overdose
Risk of AIDS or STDs

Heartburn
Hangover
Disability
Blackouts
Death
Change in Tolerance
Hemorrhoids

FINANCIAL

Cost of Substance
Not Following Budget
Divorce

Loss of Wages
Legal Expenses
Loss of Money

Medical Bills
Alimony

LEGAL

Jail
Public Intoxication
Record

Drug Abuse
Underage Drinking
Weapons Charge

Probation or Parole
Trafficking
Reputation

EMOTIONAL

Decreased Self Esteem
Defensive
Paranoia

Anger
Values Compromised
Guilt/Shame

Lonely
Secretive
Exhaustion

DSM-IV Criteria for Substance Abuse

- A. A maladaptive pattern of substance use leading to clinically significant impairment or distress, as manifested by one (or more) of the following, occurring within a 12-month period:
- (1) recurrent substance use resulting in a failure to fulfill major role obligations at work, school, or home (e.g., repeated absences or poor work performance related to substance use; substance-related absences, suspensions, or expulsions from school; neglect of children or household)
 - (2) recurrent substance use in situations in which it is physically hazardous (e.g., driving an automobile or operating a machine when impaired by substance use)
 - (3) recurrent substance-related legal problems (e.g., arrests for substance-related disorderly conduct)
 - (4) continued substance use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of the substance (e.g., arguments with spouse about consequences of intoxication, physical fights)
- B. The symptoms have never met criteria for Substance Dependence for this class of substance.

DSM-IV Criteria for Substance Dependence

A maladaptive pattern of substance use, leading to clinically significant impairment or distress, as manifested by three (or more) of the following, occurring at any time in the same 12-month period:

- (1) tolerance, as defined by either of the following:
 - (A) a need for markedly increased amounts of the substance to achieve intoxication or desired effect
 - (B) markedly diminished effect with continued use of the same amount of the substance
- (2) withdrawal, as manifested by either of the following:
 - (A) the characteristic withdrawal syndrome for the substance
 - (B) the same (or a closely related) substance is taken to relieve or avoid withdrawal symptoms
- (3) the substance is often taken in larger amounts or over a longer period than was intended
- (4) there is a persistent desire or unsuccessful efforts to cut down or control substance use
- (5) a great deal of time is spent in activities necessary to obtain (e.g., visiting multiple doctors or driving long distances), use (e.g., chain smoking), or recover from the substance
- (6) important social, occupational, or recreational activities are given up or reduced because of substance use
- (7) the substance use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance (e.g., current cocaine use despite recognition of cocaine-induced depressions, or continued drinking despite recognition that an ulcer was made worse by alcohol consumption)

Specify if:

With Physiological Dependence (evidence of tolerance or withdrawal)

Without Physiological Dependence (no evidence of tolerance or withdrawal)

Source: American Psychiatric Association: Diagnostic and Statistical Manual of Mental Disorders, 4th Edition. Washington, D.C., APA, 1994.

INTRODUCTION TO REHABILITATION

Purpose: This session provides a basic introduction to the concept of rehabilitation including a general definition and some historical perspectives on how disability was viewed throughout history. This is followed with information about both the Rehabilitation Act of 1973 as amended in 1992 and the Americans with Disabilities Act of 1990. This sessions provides participants a means for exploring the concepts of rehabilitation – particularly as they apply to disability.

Learning Objectives:

1. Participants will explore ways that people with disabilities have been viewed by society through the ages and express personal opinions about how people with disabilities are viewed by today's society.
2. Participants will be able to describe how the civil rights movement contributed to the disability rights movement.
3. Participants will be able to identify at least three major themes of the amendments to the Rehabilitation Act of 1973.
4. Participants will be able to describe the three parts to the definition of a person with a disability according to the Americans with Disabilities Act.
5. Participants will be able to apply concepts of the Americans with Disabilities Act definition of disability to various scenarios through discussion with other participants.

Key Points:

- “Rehabilitation is an evolutionary and dynamic process involving the application of a broad base of expertise and knowledge, through an interdisciplinary team approach” (Chubon, 1994, page 50).
- Rehabilitation is a contemporary response to disability and reaction to disability has varied with the times and will continue to evolve.
- Rehabilitation is based on the idea that most people do have the potential to be productive members of society if given the right opportunities.

- All individuals have the right of citizenship and that society needs to provide accommodations to assure that right.
- Politically and legally, the basis of the ADA can be found in the civil rights era of the 1960's.
- The purposes of the Rehabilitation Act of 1973 are to empower people with disabilities to maximize inclusion and integration into the community and to ensure that the Federal Government promotes employment for people with severe disabilities.
- The Americans with Disabilities Act has a three point definition of a person with a disability.
- The ADA has been amended several times since it was signed into law in 1990, and the ADA is going through continuous interpretation by various court systems which will lead to additional amendments.

Session Outline:

1. Show Slide One: Discuss Chubon's definition of rehabilitation
2. Show Slide Two: Discuss some of the ways that disability has been viewed throughout history and have students discuss their beliefs about how disability is viewed today. Encourage students to provide both positive and negative views.
3. Show Slide Three: Discuss some of the basic approaches to rehabilitation.
4. Show Slide Four: Discuss the purposes of the Rehabilitation Act of 1973.
5. Show Slide Five: Discuss the themes of the 1992 Amendments to the Rehabilitation Act of 1973.
6. Show Slide Six: Discuss the three parts of the definition of disability as defined by the Americans with Disabilities Act.
7. Provide students with Handout One: Discuss some of the key points in the Compliance Manual which defines the term "disability."
8. Show any or all of Slides Seven through Fourteen. Have students discuss which of the individuals portrayed in the scenarios qualifies as having a disability as defined by the ADA.

Session Notes:

1. The faculty begin this session with a discussion of early reactions to disability. Ask students how they believe that disability was viewed throughout history. Share some of the information as follows:
 - a). Ancient Greece: This was a time when disease was viewed as something that could be understood with study. Hippocrates developed the Hippocratic Oath. Still, disability was not viewed humanely by many of the people living in this time. Babies with physical impairments were abandoned or killed as a means of improving the race. Other infants with disabilities were killed as a form of infanticide because parents did not want them to suffer through life. Individuals who became disabled later in life were not sentenced to death, however. People with disabilities either were relegated to the status of beggars or in some cases they were viewed with respect (i.e., Homer who was blind and others who were poets, writers, musicians, etc). This was a society that valued physical strength and bodily perfection.
 - b). the Middle Ages (A.D. 200 - A.D. 1500): As Christianity emerged, the pursuit of medical knowledge lessened. Disease was viewed as a moral issue and as punishment from God. Christian communities did attempt to assist those with infirmities through hospitals and institutions. Treatments frequently consisted of exorcisms, incantations, prayers, and magical herbs. Curing of disease or disability was viewed as a battle between good and evil leading, in part, to the inquisition where those viewed as different in any way were executed. People with leprosy were treated very harshly – banned, declared legally dead, isolated from society, and sometimes burned to death.
 - c). the Renaissance (1500 - 1700): As the Dark Ages cleared, interest in studying medicine re-appeared. Information was gathered and passed on to others through use of the printing press. There also was a new belief that people who had disabilities could work and did not need to “sit idle.” Still, most people with disabilities were not treated very well.
 - d). the Industrial Revolution (1700 - 1850): Industrialization and urbanization occurred at about the same time. Larger numbers of people living in close proximity gave rise to the need for prevention of disease through public health measures. Some progress was made toward providing compensation for people injured on the job and providing education and medical care to children with disabilities. Part of society still believed that people with disabilities were inferior and should not be allowed the same status as others. However, there was another part of society that persevered in humanitarian efforts. As early as 1906, efforts were made to address the vocational needs of people with disabilities. There was little success at that time.

2. Next, the faculty will ask students to discuss some of the attitudes that they have heard or experienced about people with disabilities. Even today there are a lot of individuals who are resentful toward or suspicious of people who are disabled and who are receiving public assistance. It is still not unusual for people to believe that these individuals have brought their problems on themselves and are not deserving of assistance – particularly in the form of financial benefits.
3. The faculty will then move on to discuss the general philosophy and practice of rehabilitation. Rehabilitation is based on the idea that most people do have the potential to be productive members of society if given the right opportunities. Also underlying this is the belief that all individuals have the right of citizenship and that society needs to provide accommodations to assure that right.
 - a). Holistic Approach: After WWI, with large numbers of men injured in the war, it became apparent that a structured program would be needed in order to provide services to all of the individuals who needed them. Hospitals and other facilities were established where the physical needs and psychological needs of the people who were disabled in the war were addressed. In addition, educational services were designed with the purpose of providing intellectual stimulation and to combat boredom during extended periods of recovery. These facilities were short lived; however, around the time of WWII, interest in the concept was expanded to include the philosophy that severe disability is not a singular medical problem – rather it is a multifaceted problem where all areas of a person’s life need to be “restored .”
 - b). Interdisciplinary Team Approach: This approach combines and coordinates the skill of a number of experts to address each facet of a person’s life. The specific activities are conducted concurrently and all efforts focus on preestablished goals which are agreed upon by all parties.
 - c). Civil Rights: Section 504 of the Rehabilitation Act of 1973 prohibited discrimination against people with disabilities by any program or agency receiving federal funding.
 - d). Independent Living: This movement arose from the perspective that a person with a disability needs to have control over his or her life and must have the opportunity to participate in all aspects of society. The intent of independent living is to enhance the life of someone with a disability and to break down the barriers to mainstream society. Many of these barriers are architectural and attitudinal.
4. The faculty then introduces the Rehabilitation Act of 1973. Much of this legislation has at its roots the civil rights movement of the 1960's. It has two main purposes: a) to

empower people with disabilities to maximize their employment, economic self-sufficiency, independence, inclusion, and integration into society, and 2) to ensure that the Federal Government plays a role in promoting employment for people with disabilities. The amendments of 1992 focused on a number of themes including empowerment and choice and civil rights of people with disabilities.

5. The faculty then introduces the Americans with Disabilities Act, focusing on the definition of disability.
 - a) The ADA protects a qualified individual with a "disability" from discrimination in any of the conditions and privileges of employment. To be protected by the ADA, a person must meet the definition of the term "qualified individual with a disability" as defined by the Act.
 - b) The first part of the definition covers actual physical or mental impairments that limits at least one major life activity. To fit under the first part of the definition, a person must establish three elements: 1) that (s)he has a physical or mental impairment, 2) that substantially limits, 3) one or more major life activities.
 - c) The second and third parts of the definition refer to people who may not currently have an impairment that substantially limits a major life activity but who have a history of or who are perceived as having such a substantially limiting impairment. The focus here is on the reactions of others to an individual and reflects the recognition that stereotyped assumptions about disability create major discriminatory barriers.
 - d) **Illegal Use of Drugs.** There are some exceptions to the coverage provided by the ADA, and one of these pertains to substance abusers. Any substance abuser who fits the above definition of disability and who is currently engaging in the illegal use of drugs is **not** covered by the ADA. "Illegal use of drugs" means the use, possession, or distribution of drugs which are unlawful under the Controlled Substances Act (21 USC 812). Because alcohol is a legal substance, its use does not meet the definition of "illegal use of drugs." In other words, a substance abuser who is at least 21 years of age and is currently using alcohol is still covered by the ADA (unless excluded for another reason). This exclusion, however, does not apply to an individual who has a record of illegal use of drugs but no longer uses drugs illegally or who is erroneously regarded as engaging in such use. However, an individual does not automatically satisfy the definition of "disability" simply because she or he has a record of the illegal use of drugs or is erroneously regarded as engaging in such use.
6. Faculty can then review the student handout and use the scenarios to discuss which individuals portrayed in the scenarios qualify as a person with a disability under the ADA.

REFERENCES

Books

Chubon, Robert A. (1994). Social and psychological foundations of rehabilitation. Charles C. Thomas, Publisher: Springfield, IL.

Gandy, Gerald L.; Martin, E. Davis; Hardy, Richard E.; and Cull, John G. (1987). Rehabilitation counseling and services: Profession and practice. Charles C. Thomas, Publisher: Springfield, IL.

Web Sites

The U. S. Equal Employment Opportunity Commission (EEOC) which can be found at:

<http://www.eeoc.gov/>

The ADA Technical Assistance Program which can be found at:

<http://www.adata.org/>

“Rehabilitation is an evolutionary and dynamic process involving the application of a broad base of expertise and knowledge, through an interdisciplinary team approach”

Robert A. Chubon, 1994

DISABILITY THROUGH THE AGES

Ancient Greece

The Middle Ages

The Renaissance

The Industrial Revolution

SOME APPROACHES TO REHABILITATION

Holistic Approach

Interdisciplinary Team Approach

Civil Rights

Independent Living

Rehabilitation Act of 1973, as amended in 1992

Purposes of this Act are

- 1. To empower individuals with disabilities to maximize employment, economic self-sufficiency, independence, and inclusion and integration into society via**
 1. Comprehensive and coordinated state-of-the-art programs of vocational rehabilitation
 2. Independent living centers and services
 3. Research
 4. Training
 5. Demonstration projects and
 6. The guarantee of equal opportunity
- 2. To ensure that the Federal Government plays a role in promoting the employment of individuals with disabilities, especially individuals with severe disabilities, and in assisting States and providers of services in fulfilling the aspirations of such individuals with disabilities for meaningful and gainful employment and independent living.**

Rehabilitation Act Amendments of 1992:

Major Themes include:

- ➔ consumer empowerment and choice**
- ➔ services to individuals with severe disabilities**
- ➔ integration**
- ➔ independence**
- ➔ self-sufficiency**
- ➔ civil rights for individuals with disabilities**

Americans with Disabilities Act (ADA)

Defines a person with a disability as one who:

- **has a physical or mental impairment that substantially limits one or more major life activities;**
- **has a record of such an impairment; or**
- **is regarded as having such an impairment.**

Americans with Disabilities Act

Does this person qualify?

Michael has nodes on his vocal chords. His doctor has told him that he must rest his vocal chords and that he will lose his ability to speak unless he refrains from talking for more than one hour per day for the next 1 and ½ years. If he follows his doctor's advice, his vocal chords will heal and he will have full use of his voice.

Michael, whose impairment will last for many months and will significantly restrict his ability to speak during that time, has a disability.

Source: EEOC

Americans with Disabilities Act

Does this person qualify?

Robert is an account manager who is in charge of developing a major advertising campaign for his firm's biggest client. Although he used to be easygoing and relaxed in the office, Robert has become very irritable at work. He has twice lost his temper with his assistant, and he recently engaged in a shouting match with one of his superiors. Robert has consulted a psychiatrist, who diagnosed a recurrence of the post-traumatic stress disorder for which he was treated several years ago.

Robert has an impairment. His post-traumatic stress disorder, a mental disorder, is a mental impairment.

Source: EEOC

Americans with Disabilities Act

Does this person qualify?

Jackie is a lawyer who is impatient with her co-workers and her boss. She often loses her temper, frequently shouts at her subordinates, and publically questions her boss' directions. Her colleagues think that she is rude and arrogant, and they find it difficult to get a long with her.

Jackie does not have an impairment. Personality traits such as impatience, a quick temper, and arrogance in and of themselves are not impairments.

Source: EEOC

Americans with Disabilities Act

Does this person qualify?

Regina applies for a job as a cashier at her neighborhood supermarket. The store manager speaks with her briefly and then asks her to fill out a written job application form. She does not complete the form because she cannot read it. Regina, who has the equivalent of a second grade education, was never taught to read.

Regina does not have a physical or mental impairment as defined by the ADA. A lack of education is not an impairment for ADA purposes.

Source: EEOC

Americans with Disabilities Act

Does this person qualify?

Claude has a mild form of Type II, non-insulin-dependent diabetes. He does not need to take insulin or other medication, and his physician has placed no significant restrictions on his activities. Instead, his physician simply has advised Claude to maintain a well balanced diet and to reduce his consumption of foods that are high in sugar or starch.

Although diabetes often substantially limits an individual's major life activities, Claude's diabetes does not substantially limit any of his major life activities. It has only a moderate effect on what he eats, and it does not restrict him in any other way.

Source: EEOC

Americans with Disabilities Act

Does this person qualify?

Charles has a permanent knee impairment that causes him pain when he walks for extended periods. He can walk for ten miles at a time without discomfort, but he experiences pain on the eleventh mile.

Charles' knee impairment does not substantially limit his ability to walk. The average person in the general population would not be able to walk for eleven miles without experiencing some discomfort.

Source: EEOC

Americans with Disabilities Act

Does this person qualify?

Glenda, who has sickle cell anemia, frequently experiences severe back and joint pain. As a result of the sickle cell disease, Glenda often cannot walk for more than very short distances.

Glenda's impairment (sickle cell anemia) substantially limits her ability to walk. The average person in the general population can walk for more than very short distances.

Source: EEOC

Americans with Disabilities Act

Does this person qualify?

Margaret has been unemployed for two years. Although she has actively sought work, she has not been able to find a job. Margaret asserts that employers will not hire her because she is a convicted felon who served three years in prison for armed robbery. She argues that her prison record is a disability because it prevents her from getting a job.

Margaret, however, does not have a disability because she does not have a physical or mental impairment as defined by the ADA. A prison record is not an impairment for ADA purposes.

Source: EEOC

The U.S. Equal Employment Opportunity Commission
Excerpts from the Executive Summary: Compliance Manual
Section 902, Definition of the Term "Disability"***

902.1 Introduction and Summary

(a) General -- Title I of the Americans with Disabilities Act, 42 U.S.C. §§ 12101-17 (Supp. IV 1992) [hereinafter ADA or Act], prohibits employment discrimination on the basis of disability. The ADA protects a qualified individual with a "disability" from discrimination in job application procedures; hiring; advancement; discharge; compensation; job training; and other terms, conditions, and privileges of employment. To be protected by the ADA, a person must meet the definition of the term "qualified individual with a disability" as defined by the Act and implementing regulations.

A major part of the inquiry in an ADA charge often will be the determination of whether the charging party is protected by the Act. This determination frequently requires more extensive analysis than does the determination of whether a person is protected by other nondiscrimination statutes. For example, it is generally clear whether a person is of a particular race, national origin, age, or sex that is alleged to be the basis of discrimination. By contrast, it often is less clear whether a person's physical or mental condition constitutes an impairment of sufficient degree to establish that the person meets the statutory definition of an individual with a "disability."

The definition of "disability" under the ADA reflects the intent of Congress to prohibit the specific forms of discrimination that persons with disabilities face. While individuals with disabilities may experience the types of discrimination that confront other groups, they also may encounter unique forms of discrimination because of the nature of their disabilities and the effect that their present, past, or perceived conditions have on other persons. The purpose of the ADA is to eliminate discrimination that confronts individuals with disabilities.

Since the definition of the term "disability" under the ADA is tailored to the purpose of eliminating discrimination prohibited by the ADA, it may differ from the definition of "disability" in other laws drafted for other purposes. For example, the definition of a "disabled veteran" is not the same as the definition of an individual with a disability under the ADA. Similarly, an individual might be eligible for disability retirement but not be an individual with a disability under the ADA. Conversely, a person who meets the ADA definition of "disability" might not meet the requirements for disability retirement.

(b) Statutory Definition: With respect to an individual, the term "disability" means (A) a physical or mental impairment that substantially limits one or more of the major life activities of such individual; (B) a record of such an impairment; or (C) being regarded as having such an impairment. A person must meet the requirements of at least one of these three criteria to be an individual with a disability under the Act.

The first part of the definition covers persons who actually have physical or mental impairments that substantially limit one or more major life activities. The focus under the first part is on the individual, to determine if (s)he has a substantially limiting impairment. To fall under the first part of the definition, a person must establish three elements:

1. that (s)he has a physical or mental impairment
2. that substantially limits
3. one or more major life activities.

The second and third parts of the definition cover persons who may not have an impairment that substantially limits a major life activity but who have a history of, or have been misclassified as having, such a substantially limiting impairment, or who are perceived as having such a substantially limiting impairment. The focus under the second and third parts is on the reactions of other persons to a history of an impairment or to a perceived impairment. A history or perception of an impairment that substantially limits a major life activity is a "disability." These parts of the definition reflect a recognition by Congress that stereotyped assumptions about what constitutes a disability and unfounded concerns about the limitations of individuals with disabilities form major discriminatory barriers, not only to those persons presently disabled, but also to those persons either previously disabled, misclassified as previously disabled, or mistakenly perceived to be disabled.

902.2 Impairment

(a) General -- The person claiming to be an individual with a disability as defined by the first part of the definition must have an actual impairment. If the person does not have an impairment, (s)he does not meet the requirements of the first part of the definition of disability. Under the second and third parts of the definition, the person must have a record of a substantially limiting impairment or be regarded as having a substantially limiting impairment.

A person has a disability only if his/her limitations are, were, or are regarded as being the result of an impairment. It is essential, therefore, to distinguish between conditions that are impairments and those that are not impairments. Not everything that restricts a person's major life activities is an impairment. For example, a person may be having financial problems that significantly restrict what that person does in life. Financial problems or other economic disadvantages, however, are not impairments under the ADA. Accordingly, the person in that situation does not have a "disability" as that term is defined by the ADA. On the other hand, an individual may be unable to cope with everyday stress because (s)he has bipolar disorder. Bipolar disorder is an impairment. In that situation, the analysis proceeds to whether the individual's impairment substantially limits a major life activity.

(b) **Regulatory Definition** -- A physical or mental impairment means (1) any physiological disorder, or condition, cosmetic disfigurement, or anatomical loss affecting one or more of the following body systems: neurological, musculoskeletal, special sense organs, respiratory (including speech organs), cardiovascular, reproductive, digestive, genito-urinary, hemic and lymphatic, skin, and endocrine; or (2) any mental or psychological disorder, such as mental retardation, organic brain syndrome, emotional or mental illness, and specific learning disabilities. This regulatory definition does not set forth an exclusive list of specific impairments covered by the ADA. Instead, the definition describes the type of condition that constitutes an impairment.

(c) **Conditions That Are Not Impairments**

- (1) **Statutory and Legislative History Exceptions:** The statute and the legislative history specifically state that certain conditions are not impairments under the ADA. The term "impairment" does not include homosexuality and bisexuality. Further, environmental, cultural, and economic disadvantages such as a prison record or a lack of education are not impairments. In addition, age, by itself, is not an impairment. A person who has a medical condition (such as hearing loss, osteoporosis, or arthritis) often associated with age has an impairment on the basis of the medical condition. A person does not have an impairment, however, simply because (s)he is advanced in years.
- (2) **Physical Characteristics:** Simple physical characteristics are not impairments under the ADA. For example, a person cannot claim to be impaired because of blue eyes or black hair. Similarly, a person does not have an impairment simply because (s)he is left-handed. Further, a characteristic predisposition to illness or disease is not an impairment. A person may be predisposed to developing an illness or a disease because of factors such as environmental, economic, cultural, or social conditions. This predisposition does not amount to an impairment.
- (3) **Pregnancy:** Because pregnancy is not the result of a physiological disorder, it is not an impairment. Complications resulting from pregnancy, however, are impairments.
- (4) **Common Personality Traits:** Like physical characteristics, common personality traits also are not impairments. For example, a psychological profile of an applicant for a police officer position determined that the applicant "showed 'poor judgment, irresponsible behavior and poor impulse control'" but did not have "any particular psychological disease or disorder." The court ruled that the applicant's personality traits did not constitute an impairment.
- (5) **Normal Deviations in Height, Weight, or Strength:** Similarly, normal deviations in height, weight, or strength that are not the result of a physiological disorder are not impairments. At extremes, however, such deviations may constitute impairments. Further, some individuals

may have underlying physical disorders that affect their height, weight, or strength.

(6) **Persons with One of These Conditions and an Impairment:** A person who has one or more of these characteristics or traits also may have other conditions that are physical or mental impairments. Thus, a left-handed individual who has a heart condition has an impairment. Although left-handedness is not an impairment, heart disease is an impairment.

(d) **Contagion --** A contagious disease is an impairment. The contagious nature of the disease does not, by itself, remove that condition from the protection of the ADA. For example, the United States Supreme Court considered the case of an elementary school teacher who had been discharged because she had experienced a recurrence of tuberculosis. The Supreme Court found that the tuberculosis, which had affected the teacher's respiratory system, constituted an impairment. In so doing, the Court rejected the argument that the contagious effects of a condition (i.e., the effects of the condition on others) could be distinguished from the effects of the condition on the carrier.

The legislative history to the ADA expressly provides that infection with the Human Immunodeficiency Virus (HIV) is an impairment under the Act. Thus, for the purposes of the ADA, an individual with HIV infection has an impairment.

(e) **Voluntariness:** Voluntariness is irrelevant when determining whether a condition constitutes an impairment. For example, an individual who develops lung cancer as a result of smoking has an impairment, notwithstanding the fact that some apparently volitional act of the individual may have caused the impairment. The cause of a condition has no effect on whether that condition is an impairment. Further, the voluntary use of a prosthetic device or other mitigating measure to correct or to lessen the effects of a condition also has no bearing on whether that condition is an impairment.

Major Life Activities

(a) **General:** For an impairment to rise to the level of a disability, it must substantially limit, have previously substantially limited, or be perceived as substantially limiting, one or more of a person's major life activities. There has been little controversy about what constitutes a major life activity. In most cases, courts have simply stated that an impaired activity is a major life activity. In general, major life activities "are those basic activities that the average person in the general population can perform with little or no difficulty."

(b) **Regulatory Definition:** Commission regulations define the term "major life activities" to mean "functions such as caring for oneself, performing manual tasks, walking, seeing, hearing, speaking, breathing, learning, and working." This list is not an exhaustive list of all major life activities. Instead, it is representative of the types of activities that are major life activities. Specific activities

that are similar to the listed activities in terms of their impact on an individual's functioning, as compared to the average person, also may be major life activities. Thus, as the interpretive appendix to the regulations notes, "other major life activities include, but are not limited to, sitting, standing, lifting, [and] reaching." Mental and emotional processes such as thinking, concentrating, and interacting with others are other examples of major life activities.

902.4 Substantially Limits

(a) General: Unlike the term "major life activities," the term "substantially limits" frequently requires extensive analysis. The term "substantially limits" is a comparative term that implies a degree of severity and duration. The primary focus here is on the extent to which an impairment restricts one or more of an individual's major life activities. A secondary factor that may affect the analysis is the duration of the impairment. When analyzing the degree of limitation, one must remember that the determination of whether an impairment substantially limits a major life activity can be made only with reference to a specific individual. The issue is whether an impairment substantially limits any of the major life activities of the person in question, not whether the impairment is substantially limiting in general. Thus, one must consider the extent to which an impairment restricts a specific individual's activities and the duration of that individual's impairment.

(b) Regulatory Definition: Commission regulations define the term "substantially limits" and outline factors to consider when determining whether an impairment substantially limits any of an individual's major life activities. In that respect, the regulations state,

(1) The term "substantially limits" means: (i) Unable to perform a major life activity that the average person in the general population can perform; or (ii) Significantly restricted as to the condition, manner or duration under which an individual can perform a particular major life activity as compared to the condition, manner, or duration under which the average person in the general population can perform that same major life activity.

(2) The following factors should be considered in determining whether an individual is substantially limited in a major life activity: (i) The nature and severity of the impairment; (ii) The duration or expected duration of the impairment; and (iii) The permanent or long term impact, or the expected permanent or long term impact of or resulting from the impairment.

(c) Extent to Which an Impairment Restricts a Major Life Activity: An impairment is substantially limiting when it prevents an individual from performing a major life activity or when it significantly restricts the condition, manner, or duration under which an individual can perform a major life activity. The individual's ability to perform the major life activity must be restricted as compared to the ability of the average person in the general population to perform the activity.

Most of the discussion and analysis of the concept of substantial limitation has focused on its meaning as applied to the major life activity of working. This is largely because there has been little dispute about what is meant by such terms as "breathing," "walking," "hearing," or "seeing" but much dispute about what is meant by the term "working." Consequently, the determination of whether a person's impairment is substantially limiting should first address major life activities other than working. If it is clear that a person's impairment substantially limits a major life activity other than working, then one need not determine whether the impairment substantially limits the person's ability to work. On the other hand, if an impairment does not substantially limit any of the other major life activities, then one must determine whether the person is substantially limited in working.

The determination of whether an individual has a disability is not necessarily based on the name or diagnosis of the impairment the person has, but rather on the effect of that impairment on the life of the individual. Some impairments may be disabling for particular individuals but not for others, depending on the stage of the disease or disorder, the presence of other impairments that combine to make the impairment disabling or any number of other factors.

For more information on the Supreme Court rulings and their impact on determining whether specific individuals meet the definition of "disability," consult the Instructions for Field Offices: Analyzing ADA Charges After Supreme Court Decisions Addressing "Disability" and "Qualified," which can be found on EEOC's website at www.eeoc.gov.

** The complete document can be found on EEOC's website at www.eeoc.gov.

INTRODUCTION TO RESEARCH METHODS

Purpose: This session introduces the participants to qualitative and quantitative types of research. Participants will learn to identify a problem, to select a sample of subjects to study, and to apply an appropriate research methodology to the problem. Participants will learn basic approaches to data analysis and presentation.

Learning Objectives:

1. Participants will understand the importance of research in science, health, work, and their daily lives, as well as the distinction between basic and applied research.
2. Participants will be able to identify problems to study and to develop operational definitions for these problems.
3. Participants will know the various types of qualitative research and in which situations to use each method.
4. Participants will know the various types of quantitative research and in which situations to use each method.
5. Participants will be able to comprehend basic descriptive statistics.
6. Participants will understand that the correlation between two variables does not necessarily mean that one variable “causes” the other to happen.
7. Participants will be able to write summary reports for a simple research project.
8. Participants will learn to apply these research methods to simple problem scenarios and to present the results.

Key Points:

- Research is used in almost every aspect of our society, including science, health, insurance, business, marketing, education, politics, etc. Ultimately, its primary use is to help people make informed, logical decisions.

- The goal of basic research is discovery; the results of basic research have potential, but not necessarily immediate, uses. The goal of applied research is to solve a problem, with the results being immediately applicable to the problem. For both basic and applied research problems, the research methodology may be either qualitative or quantitative in nature.
- Qualitative and quantitative research methods have different perspectives and assumptions, as well as different forms of data collection.
- Qualitative methods tend to be exploratory and attempt to answer the question, “Why?”
- Quantitative methods tend to be exploratory and attempt to answer the question, “How many?”
- Before selecting a research method, the researcher must operationally define the problem to be studied, develop hypotheses, and then determine the appropriate research methods for testing the hypotheses (e.g., “Why?” or “How many?”).
- Qualitative research methodology, also called Ethnography, involves the collection of data from subjects in a natural setting via direct observation, recording of data and/or interviewing. Types of naturalistic observations include scan sampling, focal sampling, and all occurrences sampling.
- Quantitative research methodology involves the collection of data from subjects in a structured, controlled environment. Types of quantitative methods include correlational methods, causal-comparative methods, and especially experimental methods.
- It is not uncommon for research studies to employ both qualitative and quantitative methods. In some situations, one approach may be better than the other. In other situations, they may be complementary.
- Recordable, analyzable data can be obtained from both qualitative and quantitative methods. In some situations (e.g., oral histories), qualitative research may be purely descriptive with no statistical analysis.
- Data from research studies may be analyzed and summarized in meaningful ways through descriptive and inferential statistics. Descriptive statistics examine measures of central tendency such as the mean, or average, and the mode, or most common result, recorded for a behavior from a sample of subjects. Descriptive statistics also examine measures of variability such as the variance, how far all of the recorded results for a behavior are located from the mean. Inferential statistics compare the results from the studied sample to the entire population. Both descriptive and inferential statistics require the use of computer programs such as EXCEL, SAS, or SPSS.

- Research results can be presented in a report consisting of, in order, an introductory literature review, a summary of the problem and hypotheses, a detailed description of the research methods used, data results, and a discussion of the results.

Materials Needed:

Calculators
M&M's
Paper
Graph Paper
Plastic bags for M&M's
Pencils
Sample research papers and/or journals

Session Outline:

1. Discuss applications of research and the overall types of research, emphasizing qualitative and quantitative approaches. Show slides 1-3.
2. Describe how a meaningful problem to be studied is identified and operationally defined. Discuss the types of hypotheses and how these are developed to explain the problem. Show slides 4-7.
3. Describe the types of qualitative research and how they are conducted. Show slides 8-18.
4. Describe the types of quantitative research and how they are conducted. Show slides 19-38.
5. Discuss the role of the researcher and ethical considerations of research. Show slides 39-40.
6. Describe the components of a research report. Show slide 41-42.

Session Notes:

1. Faculty will begin this session providing examples of research methodology that touches many aspects of a person's everyday life. The faculty will stress that students can responsibly and usefully apply research methods in their work as well as be intelligent consumers of statistical information presented to them by marketers, politicians, insurance companies, etc. Faculty will stress the many different types of research methods that students can use – it does not always just

involve “numbers.” With the areas involving data analysis, faculty should help students suffering from “math anxiety” to overcome these fears and any negative connotations of “research.”

2. Faculty will then provide an overview of the types of research methods, especially emphasizing the qualitative and quantitative branches of research methodology that are the focus of this session. Identification of a research problem, hypothesis development, and selection of the appropriate research method are then presented.
3. Faculty will clearly illustrate the difference between null and directional hypotheses, and the difference between independent and dependent variables.
4. Faculty will then provide a thorough overview of qualitative research methods, including several major types of qualitative research, strengths and weaknesses of qualitative research, and examples of each qualitative research method. Qualitative methods presented will include open-ended interviews, naturalistic observations (scan, focal, and all occurrences samples), document analysis, case studies, and self-reflection. Faculty will demonstrate that even “quantitative” data can be generated from qualitative research.
5. Faculty will then provide a thorough overview of quantitative research methods, including the major types, strengths and weaknesses, and examples. Correlational, causal-comparative, and the three types of experimental research will be presented.
6. Faculty will discuss the role of the researcher in implementing qualitative and quantitative research designs. Ethical considerations in research will be stressed, including confidentiality of the individual research subject’s information, consent, and avoidance of any psychological or physical harm from the experiments.
7. Faculty will provide a basic overview of descriptive and inferential statistics. Implementation of descriptive statistics will be emphasized. Uses of inferential statistical types will be summarized without equations. Faculty will address “math anxiety” by demonstrating the simplicity of basic statistical approaches, bearing in mind that statistics are a major mental roadblock for many students considering research methodology courses.
8. Faculty will summarize the session and reiterate the applications of research methods to work and everyday living. Faculty will distribute one take-home qualitative research assignment for students to bring for discussion at their first exercise session.

ANNOTATED REFERENCES

Books

American Educational Research Association, American Psychological Association, & National Council on Measurement in Education (1985). Standards for educational and psychological testing. Washington, D.C.: American Psychological Association. This manual establishes guidelines for researchers in assessing the validity and reliability of their test and questionnaire instruments. Also, guidelines are provided for licensure examinations, testing minorities, testing disabled individuals, and ethical considerations in research.

American Psychological Association (2001). Publication manual of the American Psychological Association, 5th ed. Washington, D.C.: American Psychological Association. This is the book on writing publishable research articles for theses, dissertations, and major research journals in the social sciences. Included are detailed information for proper citations, editorial styles, manuscript organization and a sample research paper with notes.

Gay, L.R. & Airasian, P.W. (1999). Educational research: competencies for analysis and application, 6th ed. Upper Saddle River, NJ: Prentice-Hall. This popular textbook is a very thorough, basic introduction to research methods, including simple explanations of descriptive and inferential statistical methods and calculations. Whereas previous editions of this book emphasized quantitative research, this edition includes three chapters on qualitative methods. Exercises and sample research articles are included.

Jaeger, R.M. (1990). Statistics: a spectator sport, 2nd ed. Newbury Park, CA: SAGE. This little book, written by a distinguished educational research professor, clearly presents both descriptive and inferential statistical techniques without using any mathematical equations! The book walks students through actual research reports and stresses accurate interpretation of results.

Mertens, D.M. (1997). Research methods in education and psychology: integrating diversity with quantitative and qualitative approaches. Newbury Park, CA: SAGE. This book emphasizes qualitative research methods, particularly with applications towards studying minority issues, feminism, and the disabled. Quantitative methods are also described. Sample articles are used to guide students through each research approach.

Paterson, J.D. (2001). Primate behavior: an exercise workbook, 2nd ed. with CD-ROM. Prospect Heights, IL: Waveland Press. While this laboratory workbook is geared

towards studies of non-human primates, it strongly demonstrates techniques of naturalistic observation, including focal, scan, and all-occurrences sampling. It integrates descriptive summaries with collected data analysis.

Journals

Educational Researcher, published monthly by the American Educational Research Association, includes many general articles describing qualitative research approaches, particularly with application to education theory and diversity issues.

Journal of Educational and Behavioral Statistics, published by the American Statistical Association and the American Educational Research Association, includes many detailed articles involving quantitative research methods as applied to educational issues.

Web Sites (a few of many)

Qualitative research:

<http://www.ualberta.ca/~jrnorris/qual.html>

<http://writing.colostate.edu/references/research/observe/>

<http://www.nova.edu/ssss/QR/practice.html>

Quantitative research:

<http://trochim.human.cornell.edu/>

<http://7-12educators.about.com/msub11.htm>

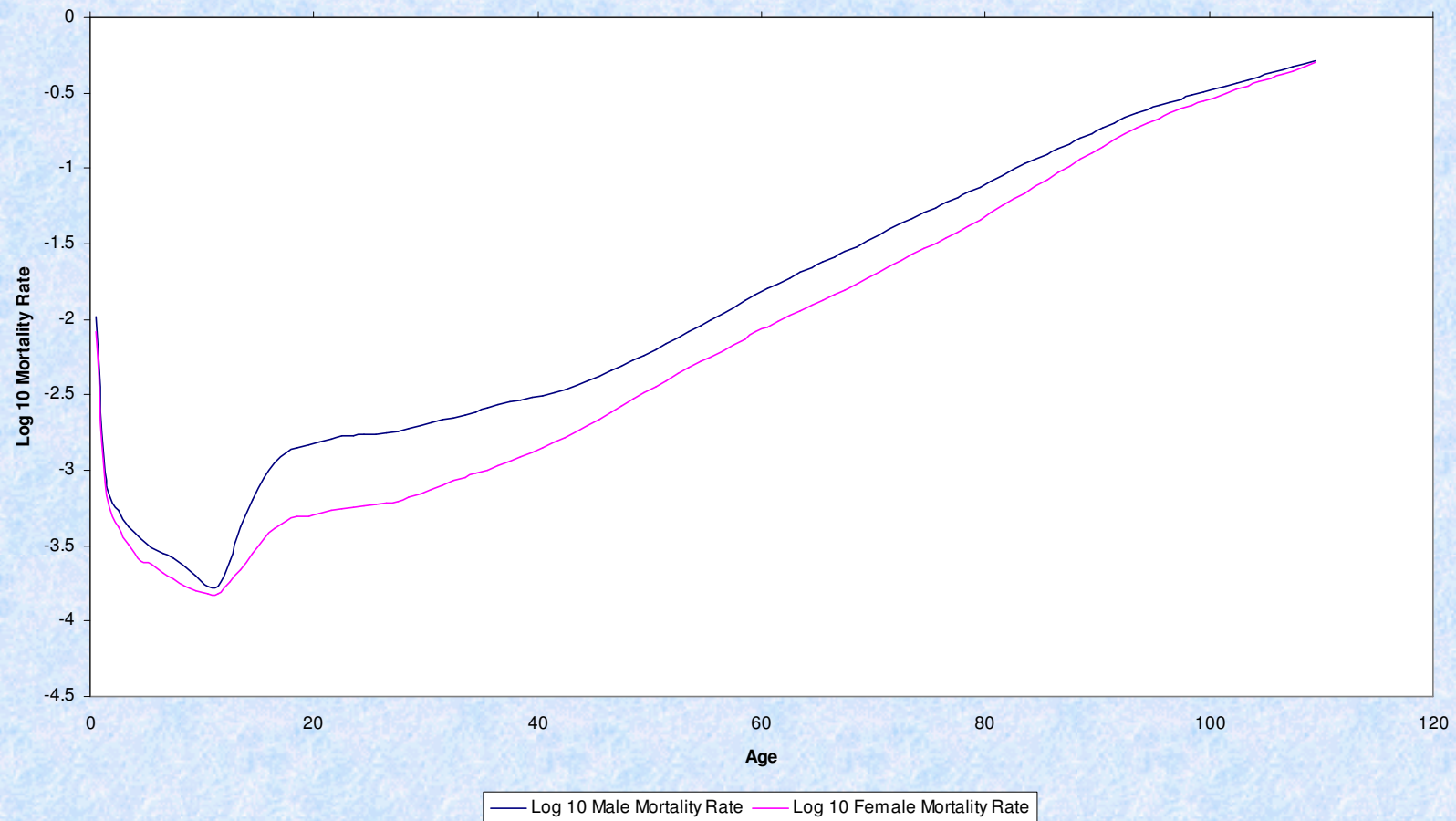
Also:

American Sociological Association Code of Ethics: <http://www.asanet.org/ecoderev.htm>

Research in Your Life

- Health: national and state cancer, heart disease statistics, prevalence of disease, correlations between high LDL cholesterol and arteriosclerosis, etc.
- Life/auto insurance: the probability of dying quadruples for males age 14-24, doubles for males and females every 7 years thereafter. Insurance companies use these data to determine your premiums!
- Marketing: consumer purchase data determines demand, nationwide distribution of new products, and cancellation of poorly-selling products.

The Gompertz Equation applied to 1990 U.S. Census Data



Types of Research

- Basic research: discovery – potential long-term uses. Example: sequencing the DNA of worms.
- Applied research: immediate solutions to problems. Example: determining the factors contributing to violence.
- Qualitative research: attempts to answer “why?” Example: why are some students more motivated than others?
- Quantitative research: attempts to answer “how many?” Example: is there a significant relationship between motivation and self-concept?

Defining the Problem

- Identify the problem to be studied: for example, you observe that some students perform poorly in a research course. Perform a literature review to learn more about the problem.
- Develop an operational definition of the problem – an operational definition clearly describes the problem in detail. For example, “the purpose of this study is to determine the effect of student self-esteem on academic performance.”

Develop a Hypothesis

- A hypothesis represents a logical prediction of what the researcher expects to happen in a situation involving the operationally-defined problem.
- Types of hypotheses:
 1. Null: there will be no difference in an observed behavior between two groups.
 2. Directional: one group will show more of a given behavior than group two.

Example Hypotheses

- Null hypothesis: there will be no difference in academic performance between students having high self-esteem and students having low self-esteem.
- Directional hypothesis: high self-esteem students will have higher academic performance than low self-esteem students.

Variables

- In the previous examples, academic performance was the dependent variable, and self-esteem was the independent variable.
- A dependent variable is the phenomenon being measured and studied.
- An independent variable can be changed by the researcher to see its effects upon the dependent variable.

Qualitative Research

- Attempts to answer the question, “Why?”
- Involves in-depth research into the motivation, attitudes, and behavior of respondents/subjects (that is, the people you are studying).
- It can also involve research into a given situation with several subjects.

Qualitative Methods

- Use descriptions and categories (words).
- Examples:
 1. Open-ended interviews with subjects.
 2. Naturalistic observations of subjects.
 3. Document analysis (Historical data).
 4. Case studies of individual subjects.
 5. Self-reflection from subjects.

Open-ended Interviews

- Subjects are asked general, less-structured questions that allow them to freely express their thoughts.
- Example: “what recent events influenced your decision to change jobs?”

Naturalistic Observations

- Behaviors can be described and/or counted.
- “Quantitative” data can be obtained:
 1. Scan sample – record all observed behaviors at specific times, such as every 30 seconds.
 2. Focal sample – record all behaviors for one individual for a given time, such as 1 hour.
 3. All occurrences sample – record all behaviors for several subjects for a given time – 1 hour.

Document Analysis

- Collect letters, legal documents, first-hand written works.
- Important: Demonstrate their authenticity.
- Examine facts in the documents to support or reject a hypothesis.

Case Studies & Self-reflection

- A case study is like a naturalistic focal sample, where one individual is observed, is interviewed, is recorded for certain behaviors.
- In self-reflection, the individual subject provides written or verbal information to the researcher, who records the information for later analysis and critical interpretation.

General Procedures for Qualitative Research

- a. Observe behaviors and ask open-ended questions.
- b. Record what is said and done.
- c. Interpret your own reactions and hypotheses about this information.
- d. Return to observe and ask questions.
- e. Return again as needed.
- f. Prepare formal theories.
- g. Draw conclusions.

Characteristics of Qualitative Research- Summary

- Data collected by interviews, direct observation, and documents.
- Data produced include quotations, descriptions, document excerpts, and perhaps some quantitative data.
- Final product is narrative description with charts and diagrams.

Qualitative Research Strengths

- More depth and detail than a standardized questionnaire.
- Open – inclusive of information ignored by structured studies.
- Closer to real-world experience.
- Minimizes experimenter pre-judgments about what will happen – events occur naturally and are recorded.

Qualitative Research Strengths

- It represents a strong venue for action-based research.
- It can incorporate culturally sensitive research issues.
- It can probe issues of societal power relations and “different voices” that are difficult to convey with quantitative approaches.

Qualitative Research Weaknesses

- No experimental controls – There is no reliable comparison of groups that were treated differently to obtain measurable differences.
- Weak cause-effect relationships – Did one variable “cause” a given behavior or event to occur?
- Subjects may or may not be randomly selected.
- Small sample sizes.

Quantitative Research

- Structured experiments that generate numbers that can be quantified and summarized as statistics.
- Statistics = data for a sample of individuals from the population.

Quantitative Methods

- Correlational Methods
- Causal-Comparative Methods
- Experimental Methods
 1. Pre-Experimental Designs
 2. Quasi-Experimental Designs
 3. True Experimental Designs

Experimental Variables

- An independent variable is a measurable phenomenon that the researcher can manipulate to affect the dependent variable.
- The dependent variable is the phenomenon being studied.
- In a controlled experiment, all groups of subjects are treated the same except for measurable changes in the independent variable from group to group.

Variable Examples

- A researcher wishes to determine the gender of alligators whose eggs are incubated at different temperatures.
- Independent variable = temperature – the researcher manipulates this variable.
- Dependent variable = gender (female or male) – this is measured.

The Correlation Method

- Determines if a relationship exists between two quantifiable variables.
- Example: Is there a relationship between student IQ scores and SAT scores?
- Collect both scores from each subject – then compute the correlation coefficient, usually the Pearson product moment correlation coefficient. There are other coefficients depending upon the type of data that is collected.

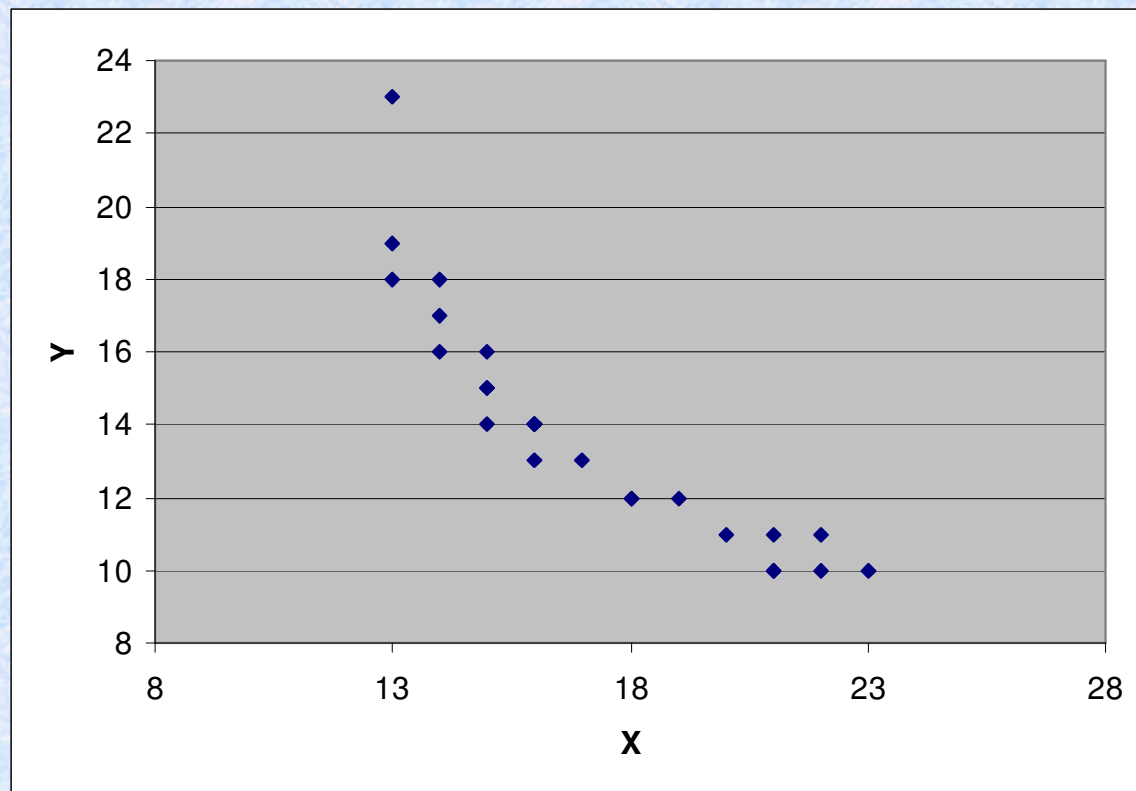
The Correlation Method

- A correlation coefficient of close to +1.00 indicates a strong positive relationship between two variables – if one increases, so does the other.
- A correlation coefficient near 0 indicates little, if any relationship.
- A correlation coefficient near –1.00 indicates that one variable tends to increase when the other variable decreases.

The Correlation Method

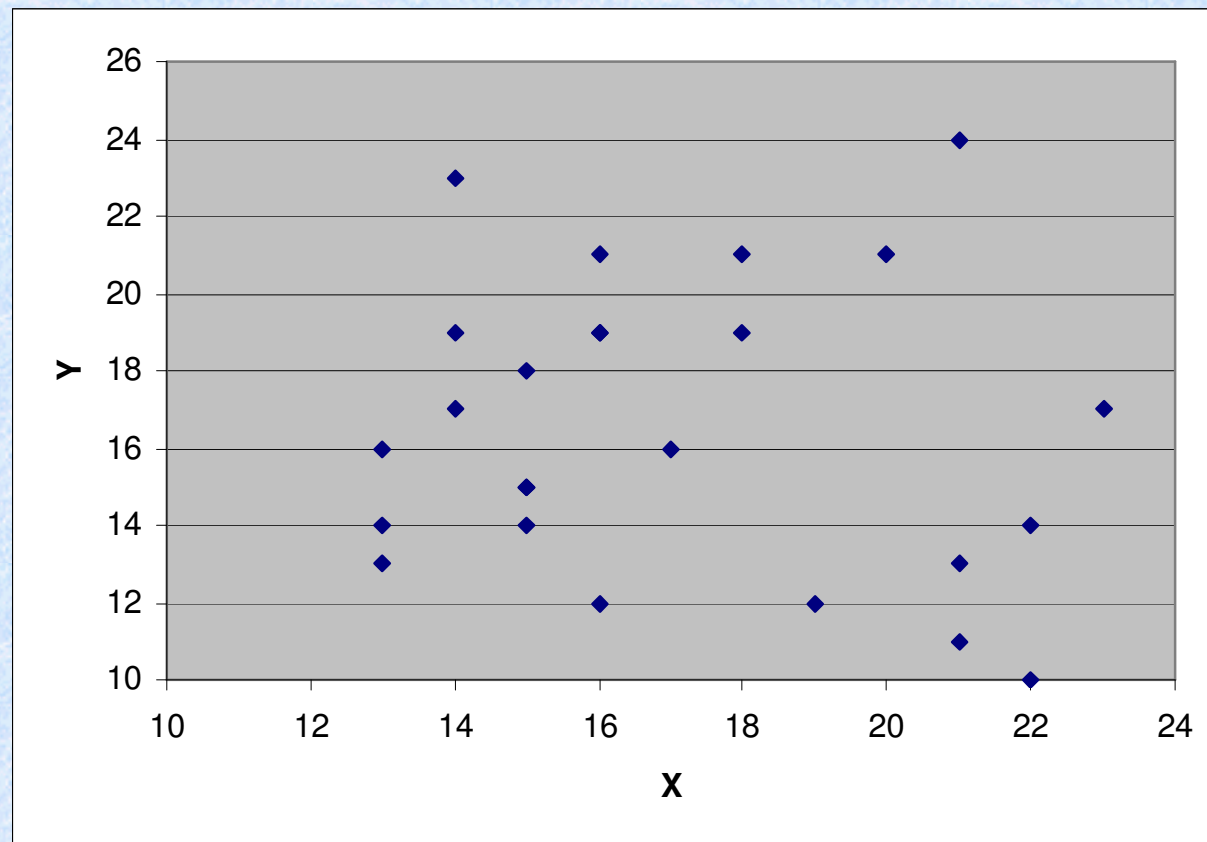
- **IMPORTANT NOTE!** – A high correlation coefficient does not necessarily mean that one variable “causes” the other.
- **Example:** Suppose that the correlation coefficient between the frequency of rainfall and the percentage of students carrying umbrellas is $- .81$, a strong relationship. But, this does not mean that if students carry umbrellas, it is less likely to rain!

$$r = -0.89$$



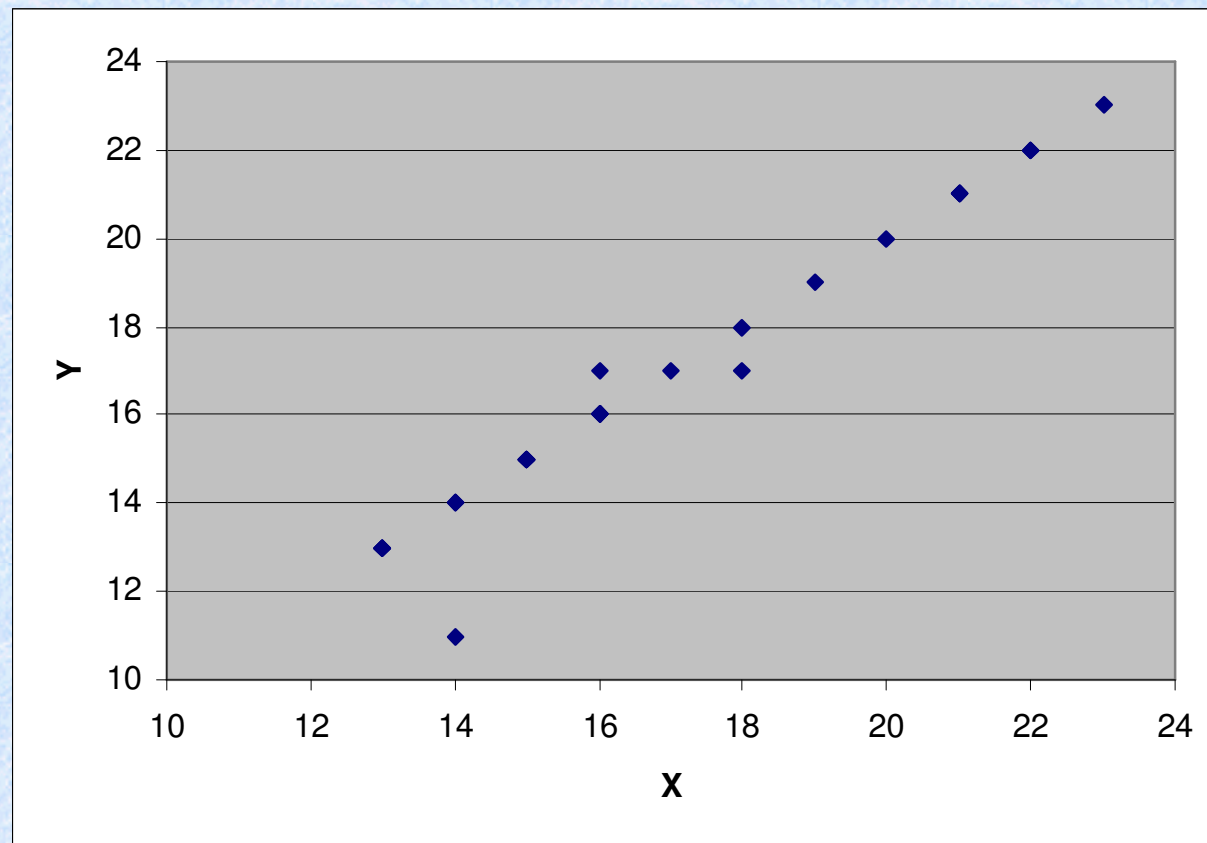
RRTC on Drugs & Disability

$$r = -0.12$$



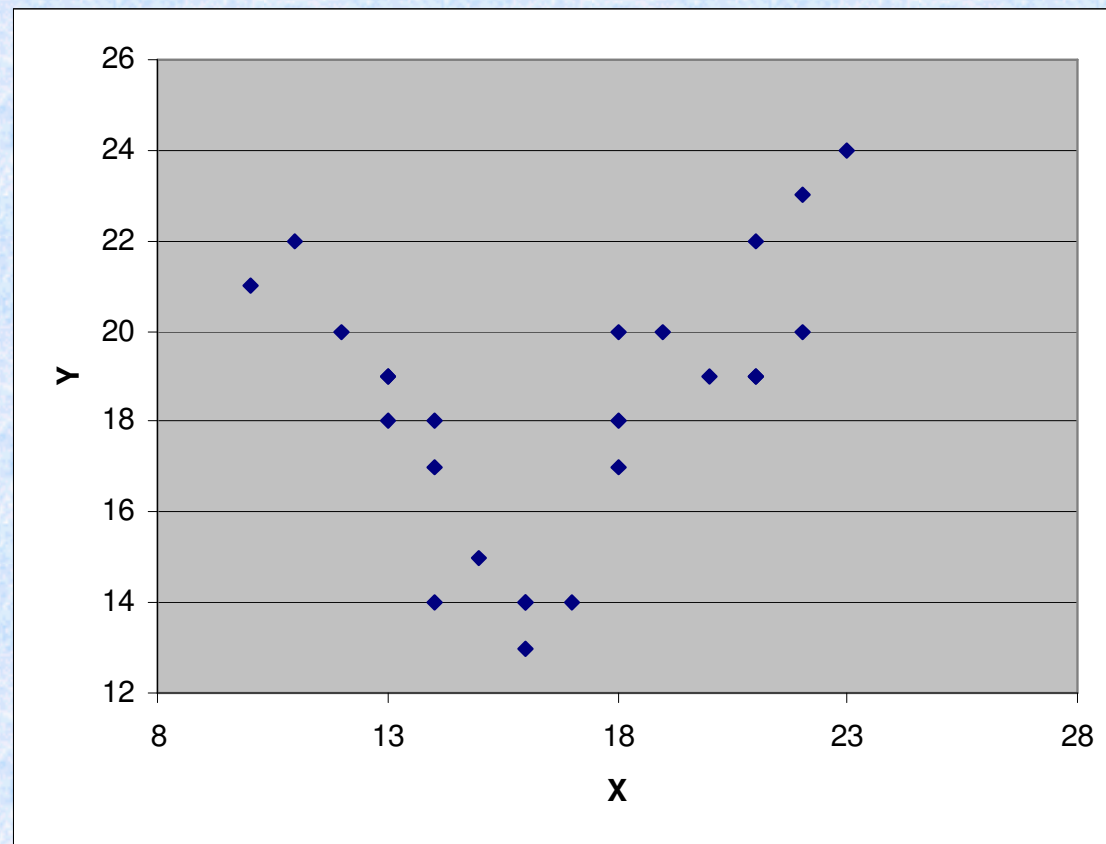
RRTC on Drugs & Disability

$$r = 0.98$$



RRTC on Drugs & Disability

$$r = 0.28$$



RRTC on Drugs & Disability

Causal-comparative Method

- The researcher attempts to define a causal relationship between the independent and dependent variables.
- The independent variable has already occurred and is not manipulated.
- Examples:
 1. Effect of gender on school achievement.
 2. Effect of self-esteem on SAT scores.
 3. Effect of family income on school attendance.

Causal-comparative Method

- Common analysis of data includes the t-test, Chi-Square test, and Analysis of Variance.
- The researcher may argue that the independent variable “causes” the dependent variable to occur. However, the reverse could be the case, or even a third variable not analyzed in the study.

Pre-experimental Designs

- Usually one group of subjects is studied.
- All individuals in the group receive a pretest, a treatment (manipulated independent variable) and/or posttest.
- Improvement of subjects scores on the posttest indicates that the treatment improves the measured behavior.
- However, the subjects may have become used to the questions, a major weakness of this design.

Quasi-experimental Designs

- Usually more than one group of subjects is studied. One group serves as the control – no change in treatment for the independent variable.
- The experimental groups receive different treatments for the independent variable.
- All groups receive pretests and posttests – data collected are statistically analyzed.
- This experimental design is used when randomly-selected subjects are not available.

True Experimental Designs

- Subjects are randomly assigned to groups.
- There is at least one control group and at least one experimental group.
- Experimental groups receive a pretest, then a treatment for the independent variable, then a posttest. Some groups only receive the posttest.
- Data analysis for group comparisons.

True Experimental Designs

- Statistical analyses include t-tests, analysis of variance, factorial analysis of variance, etc.
- True experimental designs address many threats to experimental validity:
 1. History of testing.
 2. Maturation of individuals.
 3. Regression of scores to the mean.
 4. Test interactions and other interferences.

Characteristics of Quantitative Research - Summary

- a. Identify population for study and preferably randomly select individuals into experimental groups.
- b. Observe events and/or present questionnaire with fixed answers before and/or after a treatment involving the independent variable.
- c. Tabulate and summarize data.
- d. Analyze results and draw conclusions.

Quantitative Research Strengths

- More structured data collection instruments.
- Usual random selection of subjects into groups.
- Large sample sizes are representative of the population.
- The research can be replicated.
- The data are reliable and objective.

Quantitative Research Weaknesses

- There is less detail on subject behavior, attitudes, and motivation.
- Measured behaviors are structured, not spontaneous as in a natural setting.

Researcher Roles

- In qualitative research, the researcher is a participant in the group or individual situation that is studied.
- In quantitative research, the researcher is a neutral observer – the subjects may or may not be aware of the researcher's presence.

Ethical Considerations

- The researcher should carefully protect the anonymity of the research subjects and the confidentiality of the data collected.
- The researcher needs informed consent – subjects should have a basic understanding of the study.
- The subjects should experience no psychological or physical harm in the study.

Presenting a Research Report

- A clearly presented report should include:
 1. Abstract: 50-200 word summary of study.
 2. Introduction: Literature review, statement of the problem, and hypotheses.
 3. Methods used in the study.
 4. Results – data, descriptive and inferential statistics.
 5. Discussion of results – critical analysis of theory relating to the problem and how the results agree/disagree with previous studies outlined in the literature review. Recommended future research.

References

- American Psychological Association (2001). Publication manual of the American Psychological Association, 5th ed. Washington, D.C.: Author.
- Gay, L.R. & Airasian, P.W. (1999). Educational research: competencies for analysis and application, 6th ed. Upper Saddle River, NJ: Prentice-Hall.
- Jaeger, R.M. (1990). Statistics: a spectator sport, 2nd ed. Newbury Park, CA: SAGE.
- Tillman, L.C. (2002). Culturally sensitive research approaches: An African-American perspective. *Educational Researcher*, 31 (9), 3-12.
- Wilkinson, L. & APA Task Force on Statistical Inference (1999). Statistical methods in psychology journals: Guidelines and explanations. *American Psychologist*, 54 (8), 594-604.

STUDENT EXERCISES

Assignment 1 – Open Ended Interview (Take-Home Exercise)

Think of someone you know, either a close friend or relative, and a major experience in their life of which you are aware, and of which you think that the person would be willing to discuss. Examples might be searching for a job, severe illness, experience in the military, etc.

Focus upon just one experience for the individual and approach the individual about being interviewed concerning this experience. Once the subject has agreed to participate, make a list of ten specific questions dealing with the experience. Then, meet with the subject, ask each question and write the subject's responses. Inform the subject beforehand that the confidentiality of the responses will be protected by you, the researcher.

Example questions might include: "What foods did you eat during the three days preceeding your sickness?" or "Did you sense any positive/negative attitudes from the people who interviewed you for the job?" Have the questions neatly written in order with plenty of space to take detailed notes and quotations as needed. You may want to develop your own shorthand/abbreviation writing system to collect as much information as possible.

Once you are finished, thank the subject and ask if they would like a copy of your summary report. Write your summary report, including your question list and raw data attached, and bring it to the next session.

STUDENT EXERCISES

Assignment 2 – Focal Group Naturalistic Observation

Select a room or area in the building where several people are studying, working, etc. Focus upon 2-3 interacting individuals and record their behaviors for 30 minutes. Try to be inconspicuous as far as recording information, but realize that you are not “spying” on them. Ignore any sensitive or confidential information that you may hear.

Before starting on this task, you need to formulate a set of behaviors to be observing. What overall behavioral question are you asking? You do not want to be overwhelmed trying to record everything that the subjects do. For example, you might be interested in looking at behaviors related to personal distances (e.g. when does one person back-up at the approach of another subject?). While your data will have much description, you may elect to record numbers of behaviors (Subject B yawned 5 times and smiled 16 times during the 30-minute observation period). You may construct a tally sheet of behaviors:

	Behavior 1	Behavior 2	Behavior 3	Behavior 4
Subject A				
Subject B				

If you are close enough or even a member of the group being studied, you may want to write what each subject discusses, again using prudence with any confidential information.

Compile all of your descriptive and numerical behavior data. . Write your summary report, including your question list and raw data attached, and bring it to the next session.

STUDENT EXERCISES

Assignment 3 – Experimental Design

You have three bags of M&M's. One bag is marked C for Control Group, another bag is marked X1 for experimental group 1, and a third bag is marked X2 for experimental group 2. We will assume that the two experimental groups have received a treatment, with group 2 receiving twice the treatment of group 1. Group C received no treatment.

Count the number of M&M's of each color in each bag and record the data in the table below:

Color	C	X1	X2
Green			
Blue			
Red			
Yellow			

Do you see a pattern between the three groups?

Write a summary of your findings. Use the graph paper provided to plot histograms for the data (for example, number of greens for groups C, X1, and X2. Include in the summary a description of a real problem that you would predict to follow the pattern of this simulation. How would you set up this new experiment?

When finished, you may eat the M&M's!

STUDENT EXERCISES

Assignment 4 – The Correlation Method

A researcher has collected the following sets of data information from 10 subjects. You will have a small scientific calculator to use in this exercise. Although the sample size is very small, compute the Pearson product moment correlation coefficient, also known as the Pearson r:

$$r = \frac{E_{XY} - \frac{(E_X)(E_Y)}{N}}{\sqrt{\left[E_{X^2} - \frac{(E_X)^2}{N} \right] \times \left[E_{Y^2} - \frac{(E_Y)^2}{N} \right]}}$$

Now, don't let this equation scare you! It is much easier than it looks. You are trying to determine the correlation coefficient "r". "X" and "Y" are the paired values of two behaviors for each individual subject. When you see "XY", that means "X times Y".

"E" means "the sum of " whatever comes after it. "N" is the total number of individual subjects, in this case N = 10.

Here is an example:

<u>Subject #</u>	<u>X (Age)</u>	<u>Y (# Cavities)</u>	<u>XY</u>	<u>X²</u>	<u>Y²</u>
A	9	3	27	81	9
B	13	6	78	169	36
C	8	1	8	64	1
D	15	3	45	225	9
E	11	4	44	121	16
F	17	2	34	289	4
G	16	5	80	256	25
H	12	4	48	144	16
I	15	1	15	225	1
J	10	2	20	100	4
<hr/>					
Sums . . . E	126	31	399	1674	121

Note that we multiply and square X and Y to get the last three columns of data, then we add all of the values in each column to get the sums.

Now, plugging the numbers into the equation above, we get:

$$r = \frac{399 - \frac{\{126)(31)\}}{10}}{\sqrt{\left[1674 - \frac{(126)^2}{10}\right] \times \left[121 - \frac{(31)^2}{10}\right]}}$$

$$r = \frac{399 - 390.6}{\left[1674 - 1587.6\right] \times \left[121 - 96.1\right]}$$

$$r = 8.4 / \sqrt{[86.4] \times [24.9]}$$

$$r = 8.4 / 46.39$$

$$r = 0.18$$

Therefore, there is a slight correlation between age and the number of cavities according to this very small sample size.

Now, it's your turn with the data on the following page!

ASSIGNMENT 4

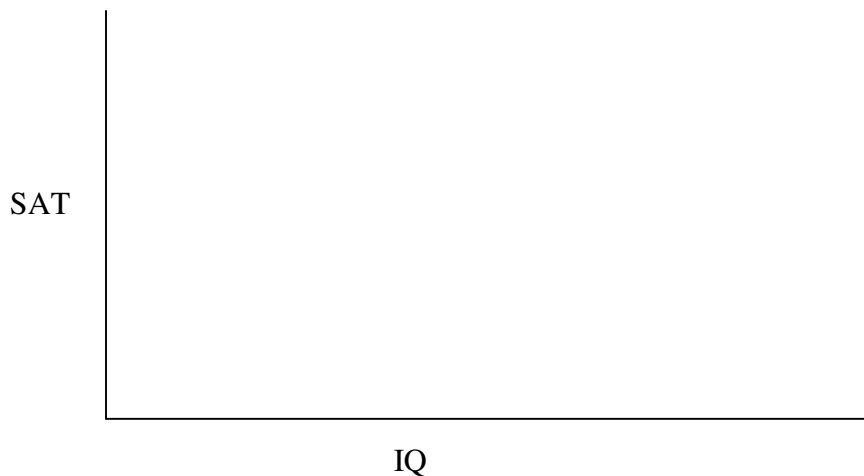
<u>Subject #</u>	<u>X (IQ)</u>	<u>Y(SAT Score)</u>	<u>XY</u>	<u>X²</u>	<u>Y²</u>
A	110	1130			
B	95	870			
C	105	920			
D	113	1380			
E	104	1210			
F	92	750			
G	94	980			
H	88	800			
I	98	830			

Sums . . . **E**

Use the same equation and carefully show your work. Take your time! Ask questions if you need help!

Questions:

1. What value did you obtain for Pearson's r ?
2. What is the meaning of this value?
3. Based upon the value that you obtained for r , would you say that IQ causes high SAT scores? Would you say that high SAT scores cause one to have a high IQ? Discuss your responses.
4. What effect does the small sample size have upon the reliability of the results that you obtained?
5. Make a simple graph below with IQ on the X axis, and SAT scores on the Y axis.



STUDENT EXERCISES

Assignment 5 – Basic Statistics

Calculate the mean, the median, the mode, and the range for the X values and for the Y values in the previous assignment.

Remember, the mean is the average – obtain the sum of X and divide by N.

The median is the middle value – since you have 10 data points, the median will be the calculated value between the fifth and sixth ranked values.

The mode is the most frequent, or common score.

The range is the difference between the highest and the lowest scores.

STUDENT EXERCISES

Assignment 6 – Writing a research report (Take-Home)

A research report should include the following:

- Title
- Abstract summary
- Introduction – literature review
- Methods
- Results - data
- Discussion of results

Think of a pertinent problem that you are interested in, particularly if it is related to disability issues. Go to the library and find 4-6 articles dealing with the problem and write a short literature review – the introduction to a paper. Include an operational definition of the problem and any hypotheses that you might wish to test.

Then write a methods section for how you would test your hypotheses. Include the research methods that you would use.

Examine the sample research papers from the trainer.

Turn in this half-article (Introductory Literature, Methods, and Bibliography).

INTERPRETING DATA IN CHARTS AND GRAPHS

Purpose: This session introduces the participants to pictorial data interpretation. Participants will learn to read and understand research data presented in research report charts, graphs, and data tables. Participants will be able to intelligently determine if charts and graphs substantiate the arguments made by the researchers. Thus, participants will gain critical thinking skills for their own research work and as consumers of public statistical data.

Learning Objectives:

1. Participants will be exposed to major pictorial methods of data presentation, including charts, graphs, data tables, plots, histograms, etc.
2. Participants will be able to describe the advantages and disadvantages for each data presentation method.
3. Participants will learn to critically interpret data with careful attention to fallacious reasoning, misleading statistics, etc.
4. Participants will understand that “correlation does not necessarily imply causation.”

Key Points:

- Research is used in almost every aspect of our society, including science, health, insurance, business, marketing, education, politics, etc.
- Individuals should learn to read and interpret data presentations not only as practicing scientists but also as daily consumers of statistical information presented to them by advertisers, the media, etc.
- Research scientists used data to clearly present their major findings to the scientific community, as well as to the general public.

- Data tables, charts, and graphs enable other researchers to replicate the experiments, to develop ideas in relation to other studies, and to formulate new hypotheses to be tested in new experiments.
- Clear relationships presented in a graph or chart may ultimately symbolize a major theory that has been supported by repeated experimentation.

Session Outline:

1. Discuss applications of research and the importance of providing clear data presentations. Show slides 1-3.
2. Describe the importance of critically reading data, graphs, and charts, not just taking the researcher's results, discussion, and statements at "face value." Stress the dangers of fallacious reasoning. Show slide 4.
3. Discuss who presents and uses data presentations. Show slides 5-6.
4. Discuss examples of basic data tables for descriptive and frequency statistics. Show slides 7-10.
5. Discuss histograms, and include coverage of the normal curve. Show slides 11-13.
6. Discuss pie charts. Show slide 14.
7. Discuss correlation matrices. Emphasize that correlation does not necessarily imply causation, just a possible association. Also, illustrate the relationship between correlations and scatter plots. Show slides 15-22.
8. Present and discuss the seven examples in slides 23-31.
9. Present other examples using journal articles, newspapers.

Session Notes:

1. Faculty will begin this session explaining the importance of clearly presenting research results in the form of tables, graphs, charts, and other forms. The faculty may elect to show a few examples from journals as part of this introduction.
2. Faculty will then emphasize the importance of clear data presentations and data interpretation. Special attention should be placed upon matching the data to the researcher's arguments. Do the data presentations support the hypothesis results and researcher conclusions? Have the researchers or other presenters of the data

deceived themselves and/or us? Beware of fallacious reasoning, such as correlation implies causation!

3. Faculty will then describe who presents and uses data, and for what purposes. Stress will be placed on the fact that everyone is a consumer of statistical data in one form or another, and that each person should be a responsible consumer of this information for their own good.
4. Faculty will provide an overview of the pictorial data presentations to be described in the session, with special attention to data tables, pie and bar charts, histograms, and types of graphs.
5. Faculty will discuss data tables, information that can be obtained from such tables, and appropriate information to include in these tables. Variations in table arrangement and types of tables based upon the data type can be briefly discussed. The usefulness of converting descriptive data table information to histograms will be described.
6. Faculty will briefly describe the normal curve, its usefulness in assessing sample data distributions, and its applications to hypothesis testing. The curve will be “fitted” to some histogram data for explanation.
7. Faculty will describe the simplicity of providing descriptive and frequency statistics, such as the number (or percentage) of individuals scoring within designated categories, via pie and bar charts.
8. Faculty will provide an overview of correlation matrices and their usefulness. The correlation – causation issue will be stressed at this point again. Correlation matrices can have many further applications, including setting up regression analyses and other advanced statistical options. In some instances, the correlation matrix enables the reader to attempt a replication of the researcher’s study. The application of positive and negative correlations of varying degrees can be illustrated using scatter plots.
9. Faculty will discuss with students seven simple examples of charts and graphs provided on the slides. Faculty can provide journal and newspaper (e.g., USA Today) examples, both good and bad, as well to illustrate the key points of the session.

ANNOTATED REFERENCES

Books

- American Psychological Association (2001). Publication manual of the American Psychological Association, 5th ed. Washington, D.C.: American Psychological Association. This is the book on writing publishable research articles for theses, dissertations, and major research journals in the social sciences. Included are detailed information for proper citations, writing style, and standards for publishable charts and graphs.
- Gay, L.R. & Airasian, P.W. (1999). Educational research: competencies for analysis and application, 6th ed. Upper Saddle River, NJ: Prentice-Hall. This popular textbook is a very thorough, basic introduction to research methods, including simple explanations of descriptive and inferential statistical methods and calculations. Whereas previous editions of this book emphasized quantitative research, this edition includes three chapters on qualitative methods. Exercises and sample research articles are included.
- Jaeger, R.M. (1990). Statistics: a spectator sport, 2nd ed. Newbury Park, CA: SAGE. This little book, written by a distinguished educational research professor, clearly presents both descriptive and inferential statistical techniques without using any mathematical equations! The book walks students through actual research reports and stresses accurate interpretation of results from tables, charts, and graphs.
- Mertens, D.M. (1997). Research methods in education and psychology: integrating diversity with quantitative and qualitative approaches. Newbury Park, CA: SAGE. This book emphasizes qualitative research methods, particularly with applications towards studying minority issues, feminism, and the disabled. Quantitative methods are also described. Sample articles and data are used to guide students through each research approach.

Journals

Most research journals, such as The Journal of Educational Psychology, Rehabilitation Counseling Bulletin, Journal of Rehabilitation, The Journal of Social Psychology, Journal of Alcohol and Drug Education, The Journal of Educational and Behavioral Statistics, American Educational Research Journal, Child Development, Review of Research in Education, Journal of Personality and Social Psychology, Science, Scientific American, and hundreds of others, are filled with useful data, charts, and graphs.

Web Sites (a few of many)

<http://research.ed.asu.edu/siip/>

<http://trochim.human.cornell.edu/>

<http://www.statsoft.com/textbook/stathome.html>

<http://www.math.yorku.ca/SCS/StatResource.html>

<http://www.stat.ufl.edu/vlib/statistics.html>

STUDENT EXERCISES

Assignment 1

Read the journal article provided to you. Interpret the graphs and write a brief summary. In your summary, provide descriptions of each graph/chart/table and its significance to the researcher's arguments. Do the graphs and tables support the conclusions made in the paper?

Assignment 2

Read the newspaper article provided to you. Interpret the graphs and write a brief summary. In your summary, provide descriptions of each graph/chart/table and its relevance to the article. Did the reported get the facts straight?

Assignment 3

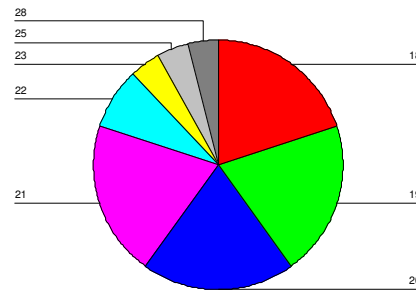
Given the SPSS data file provided to you, use the Data File Analyze and Graphs toolbar commands to perform the following, using any variable or sets of variables that you wish to test:

- a. Construct a pie chart.
- b. Construct a bar chart.
- c. Construct a general data table.
- d. Construct a histogram.
- e. Construct a scatterplot showing the relationship between two variables. Also analyze the correlation coefficient between the two variables.
- f. Print your outputs and/or copy/paste them into a brief report describing your work for this assignment.

Materials Needed:

Sample research papers and/or journals
SPSS
Sample data file

Interpreting Data in Charts and Graphs



Data Presentations

- For illustrative and summary purposes, researchers condense their accumulated experimental data into charts and other pictorial forms of presentation.
- These illustrations are designed to help the reader to understand the purpose of the research study and the study results.

Data Presentations

- The illustrations also help the researchers to promote their interpretation of the results, especially when the results are directly applicable to the public good.
- The illustrations also provide the reader with information to replicate the research study, an important component of the scientific method.

Important Considerations

- As researchers and as consumers of statistical information, each of us should carefully interpret data:
 1. Do the data make sense?
 2. Do the data objectively support the experimenter's arguments?
 3. Does a correlation imply “causation?”
 4. Is there any risk of fallacious reasoning from the data?

Who Uses/presents Data?

- Medical Researchers
- Scientists (Social, Natural, & Physical)
- Business (Sales)
- Insurance
- Legal System
- Schools
- Governments
- Politicians
- Journalists
- Industry (Production & “Quality Control”)
- Yourself (Buying, Reading or Watching the News, Making Decisions)

Types of Data Presentations

- Raw Data Tables – including descriptive statistics, correlation matrices, covariance matrices, hypothesis tests, etc.
- Charts – including bar charts, pie charts, etc. that illustrate the amount or frequency of a variable compared to other variables.
- Graphs – including two- and three-dimensional comparisons of variables.

Data Tables

Statistics

		Age	Gender	Ethnicity	Substance Abuse Problem
N	Valid	25	25	25	25
	Missing	0	0	0	0
Mean		20.40	1.40	2.84	1.7200
Median		20.00	1.00	3.00	2.0000
Mode		18 ^a	1	3	2.00
Std. Deviation		2.35	.50	1.34	.4583
Variance		5.50	.25	1.81	.2100

a. Multiple modes exist. The smallest value is shown

Data Tables

- Data tables provide basic information to the reader.
- In the preceding slide, general demographic information is summarized for a sample of $n=25$ subjects.
- For variable 1 (Age), the mean, or average age, is 20.4, while the mode, or most frequently-reported age is 18.

Data Tables

- The fact that the mean $>$ median $>$ mode tells a researcher that the distribution of scores is positively skewed, that the scores tend to “bunch-up” at the low end of the age scale.
- The standard deviation of Age values is 2.35, indicating that if the score distribution was “normal,” then about 68 % of all subjects would be age 20.4 \pm 2.35 years old. That is, 68 % of the subjects would be between 18.05-22.75.

Data Tables

- In the next example, the descriptive statistics and a histogram for Years of Education are provided for this sample of $n=25$ subjects.
- If the curve had been normal, the red bars would have perfectly followed the curve of the normal “bell curve.” But this was not the case, as you can see....

Data to Histograms

- Statistics-Years of education

- N 25 Missing 0

-

- Mean 13.0400

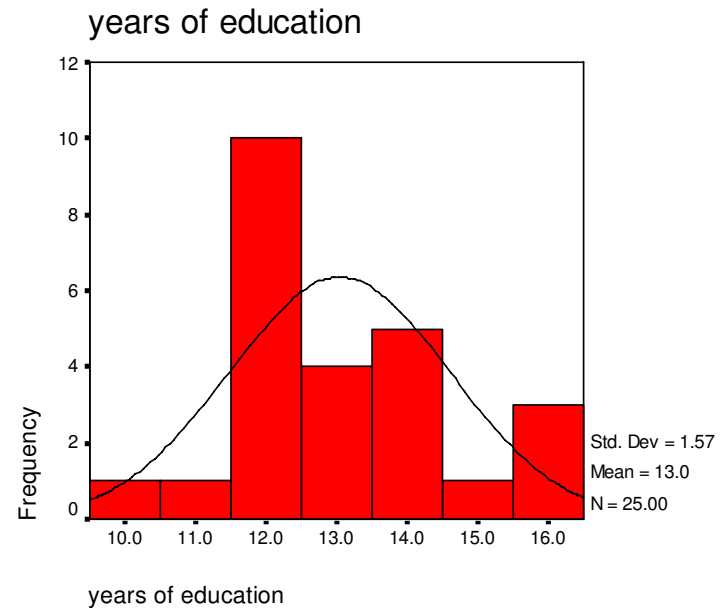
- Median 13.0000

- Mode 12.00

- Std. Deviation 1.5674

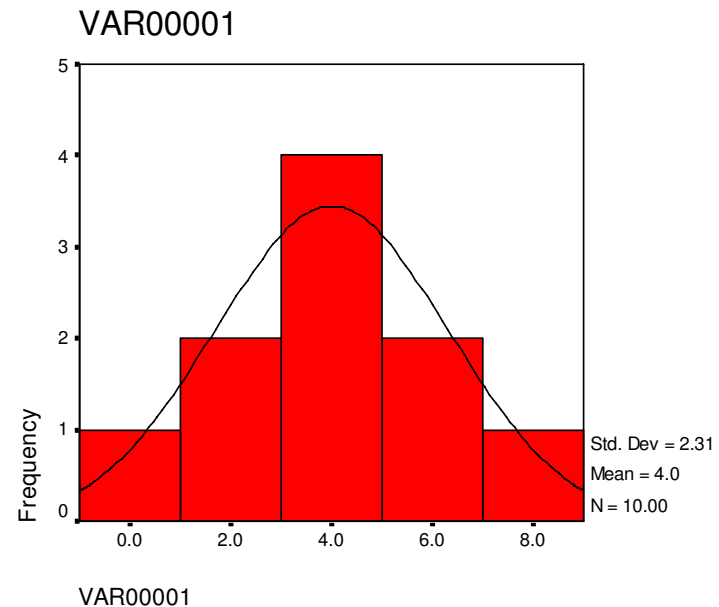
-

- Skewness .493



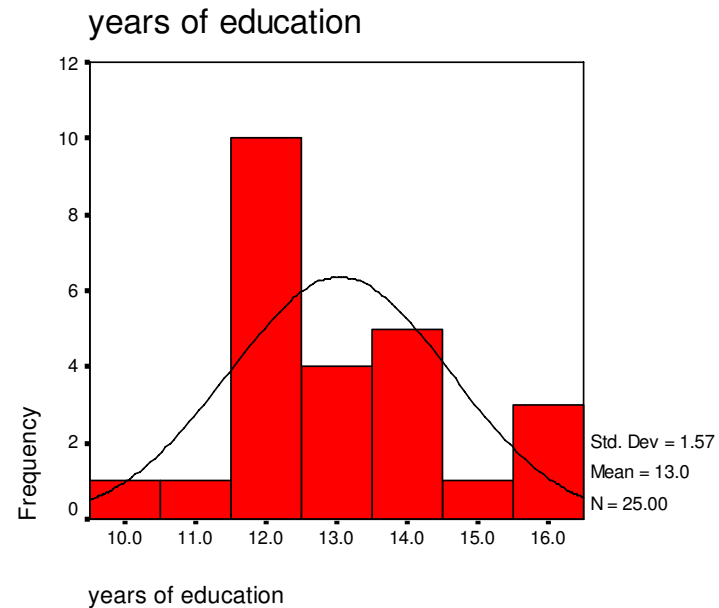
The Normal Curve

- A normal distribution would look like
- About 68 percent of all scores would fall between ± 1 standard deviation of the mean.
- About 95 % would fall between ± 2 SDs.
- Most major statistical tests assume a normal distribution for the data.



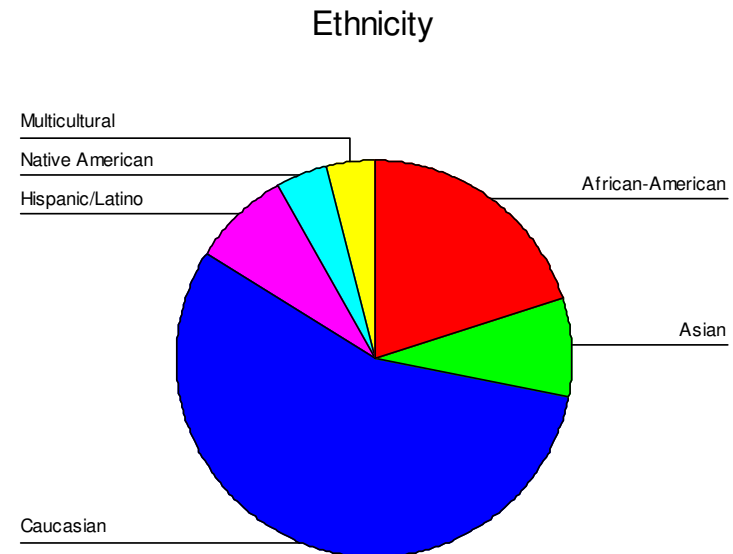
Histograms

- A histogram is a type of chart that provides a “picture” of the descriptive statistics for a given variable.
- This illustrates the ease with which you can go back and forth from data to charts.



Pie Charts

- Pie Charts enable the researcher to illustrate categories of descriptive frequencies for a variable.
- In this example, the ethnic make-up of the n=25 sample is shown.



Correlation Matrix Data

- Correlations
-
- Age Age Ethnicity Yrs of education Level of education
- Age 1.000 .021 .585** .536**
-
-
- Ethnicity .021 1.000 -.195 -.175
-
-
- Yrs of education .585** -.195 1.000 .973**
-
-
- Level of educ. .536** -.175 .973** 1.000
-
- ** Correlation is significant at the 0.01 level (2-tailed).

Interpreting Correlations

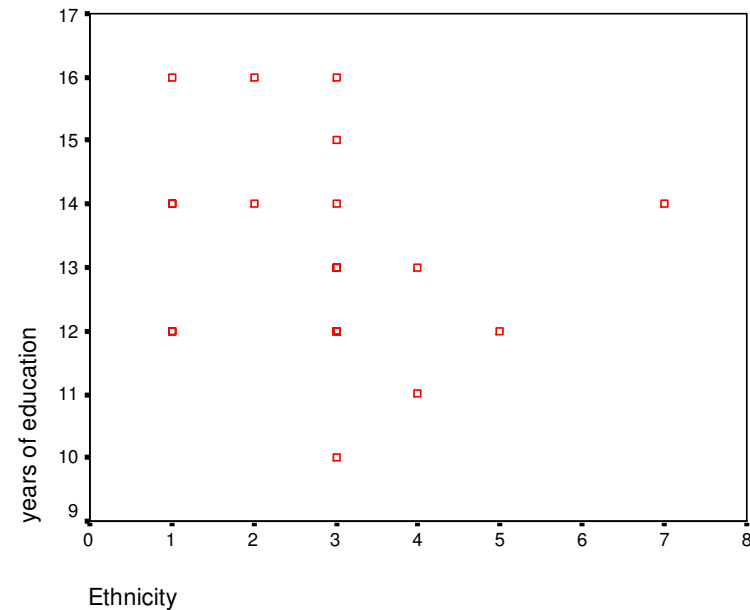
- In the preceding example, paired correlations between four variables (Age, Ethnicity, Years of Education, and Level of Education by Degree) are shown.
- A perfect correlation of 1.00 indicates that as one variable increases, so does its paired variable exactly in every case. Obviously in this example, Age-Age has 1.00 correlation!

Interpreting Correlations

- A negative correlation indicates that as one variable increases, its paired variable tends to decrease. Note the negative correlations between Years of Education and Ethnicity.
- Careful here! In this data set, Ethnicity was coded 1=African American, 3=Caucasian. Thus, the negative correlation would appear to indicate that the Caucasian subjects in the sample generally had fewer years of education. **WATCH OUT FOR DATA CODING!**

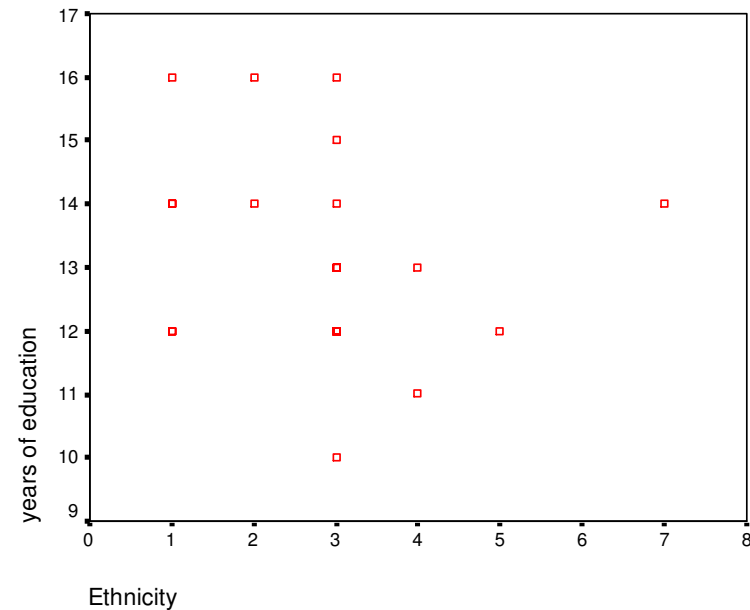
Correlations and Graphs

- Still, the negative correlation is not significant at $\alpha = .05$, the probability of rejecting a null hypothesis that is true.
- The null hypothesis here is that there is no difference in the level of education based upon ethnicity.
- The null hypothesis is supported, as illustrated by the graph. There is no clear pattern in this scatterplot graph.



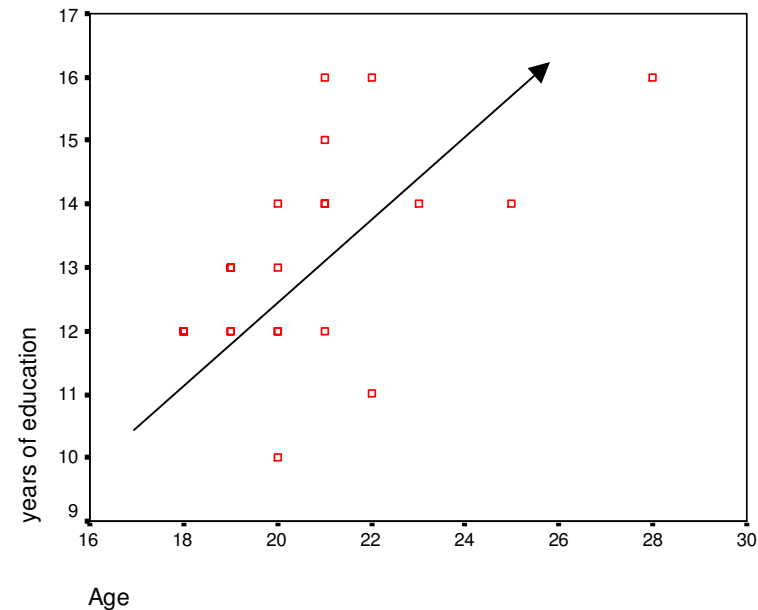
Graphs Help to Clarify Correlations

- Thus, a scatterplot graph helps the researcher to visualize the correlation between two variables.
- In this scatterplot, the data are all over the graph – a non-significant correlation is clear.



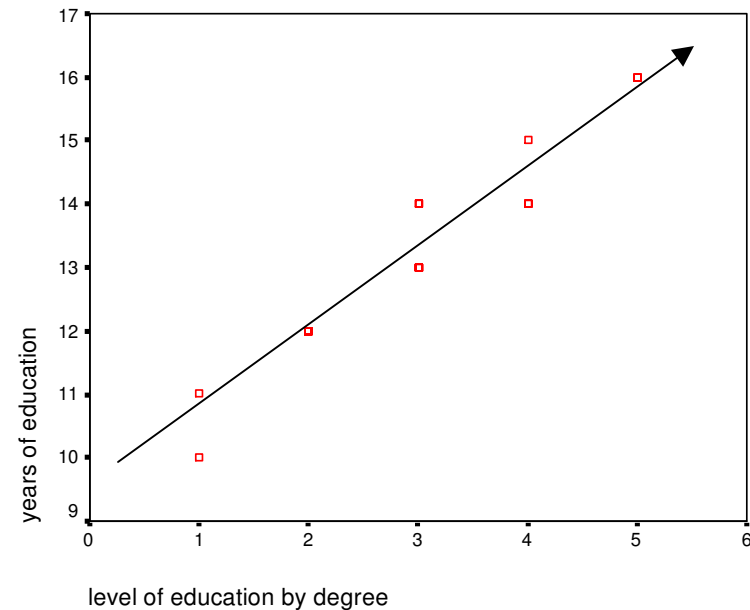
More Correlations

- The correlation between age and years of education is much stronger at .585 (as we would expect!) and is significant ($p < .01$).
- The scatterplot shows a pattern: the data tend to follow the line shown.



More Correlations

- The variables Level of Education by Degree and Years of Education have a highly significant correlation of .973.
- This is expected, since the two variables measure the same trait.
- Note the scatterplot.



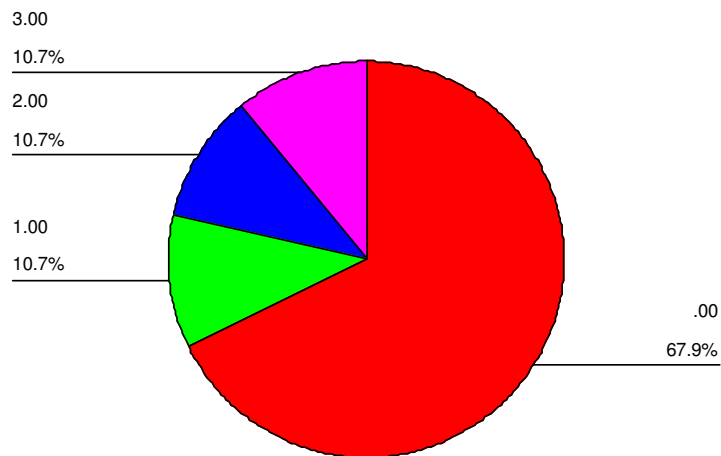
Correlation Does Not Imply Causation !!!

- It is important to remember that a high correlation does not necessarily imply that one variable “causes” the other.
- Likewise, even zero correlation does not prove that one variable has no influence on another.
- In the preceeding example, common sense would tell us that years of education should yield in many cases a higher level of education by degree.

Examples

Example 1

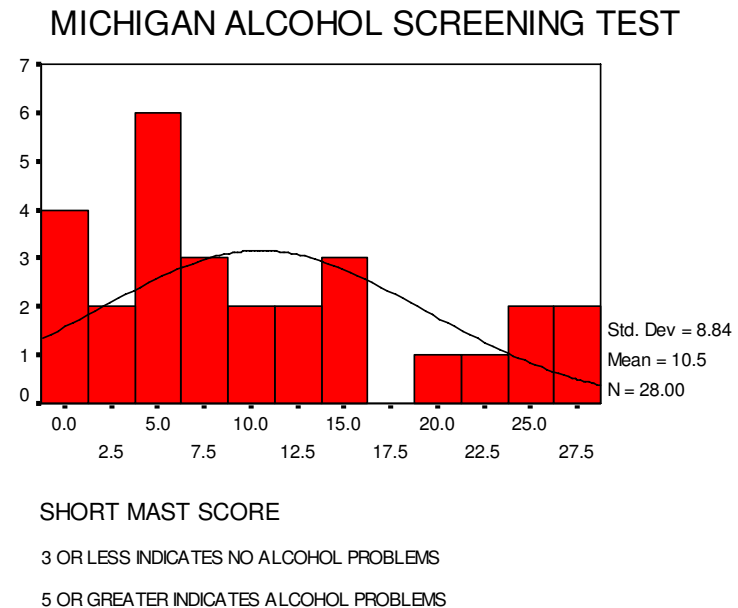
#Times Used Drugs Within the Past 3 months



- What type of data presentation is this?
- What does it tell you?
- What are some other ways that this data could have been presented?

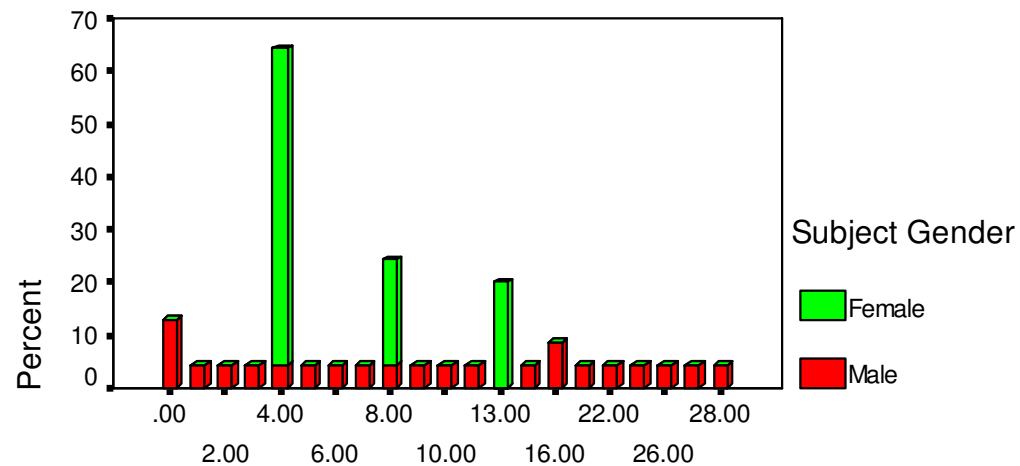
Example 2

- The data here are data from a standard alcohol-use questionnaire that was administered to n=28 subjects.
- Discuss.



Example 3 - Discuss

MICHIGAN ALCOHOL SCREENING TEST RESULTS SEPARATED BY GENDER



SHORT MAST SCORE

3 OR LESS INDICATES NO ALCOHOL PROBLEMS

5 OR MORE INDICATES ALCOHOL PROBLEMS

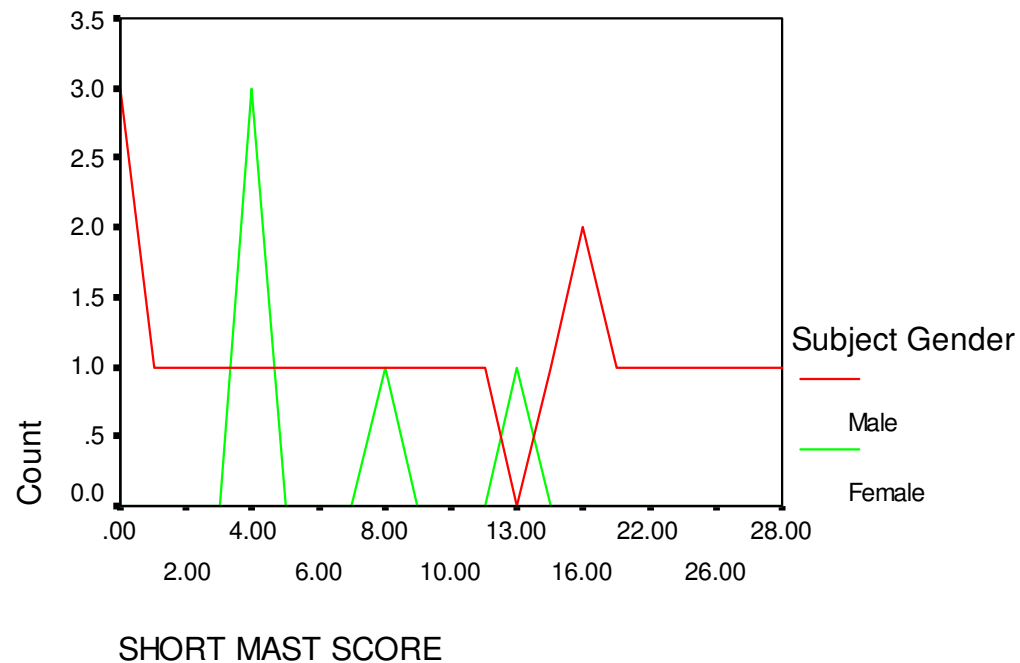
Example 4 - Discuss

- **DRUG USE IN THE PAST YEAR**

•			No	Yes
•	Male	Caucasian	6	4
•			60.0%	40.0%
•		African American	5	4
•			55.6%	44.4%
•		Asian/Pacific Islander	1	0
•			100.0%	.0%
•		Hispanic - Puerto Rican	2	0
•			100.0%	.0%
•		Multiracial/Other	0	1
•			.0%	100.0%
•	Female	Caucasian	1	0
•			100.0%	.0%
•		African American	3	1
•			75.0%	25.0%

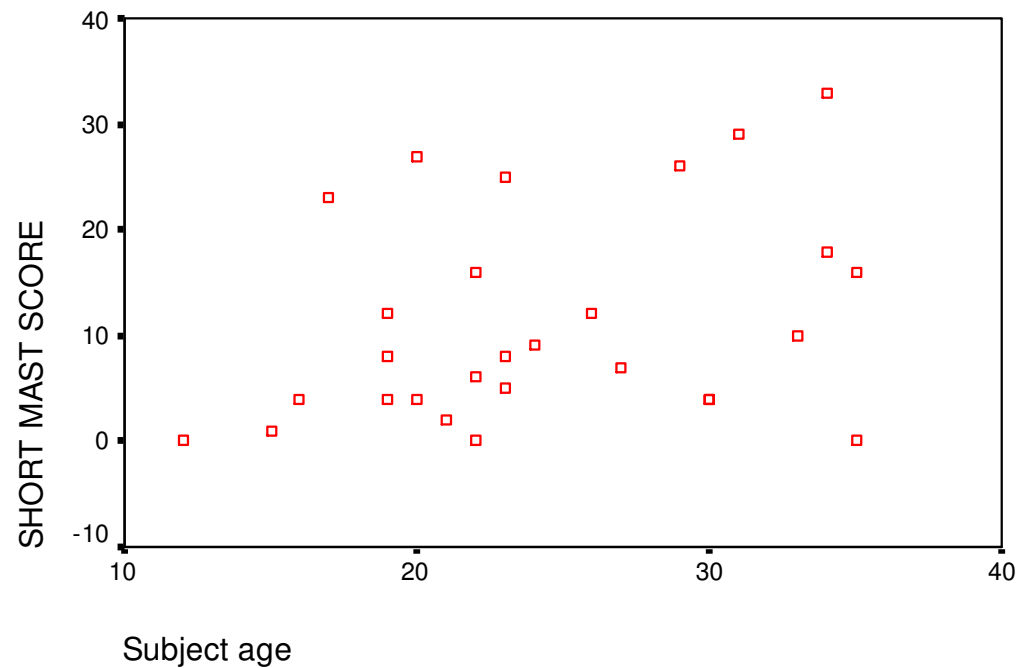
Example 5 - Discuss

MICHIGAN ALCOHOL SCREENING TEST
COMPARISON OF SCORES BY GENDER

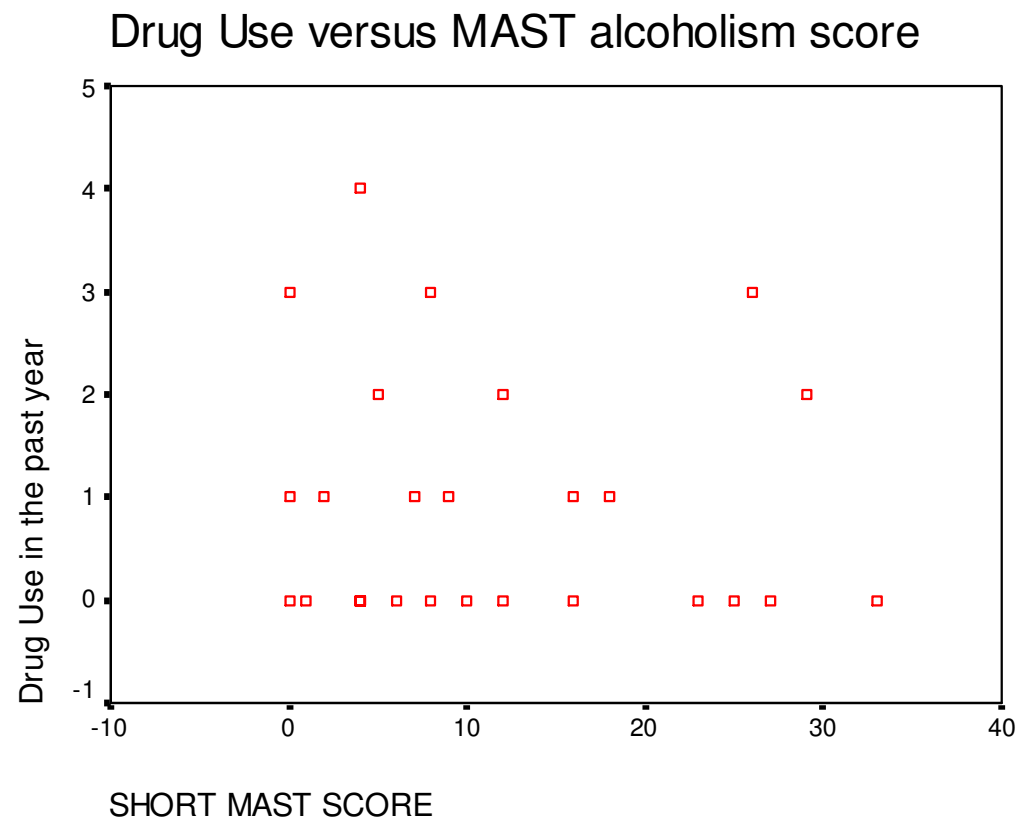


Example 6 - Discuss

MICHIGAN ALCOHOL SCREENING TEST
MAST SCORE BY AGE



Example 7 - Discuss



Conclusion

- There are many alternative methods for pictorial representation of data.
- The methods presented here are used widely in research papers.
- More elaborate presentations are possible as well, including 3D and interactive graphs.

POSTER PRESENTATIONS

Purpose: This session will give participants an overview of poster presentations and includes information on content, editing, design and layout.

Learning Objectives:

1. Participants will gain an understanding of what a poster presentation is and how it is similar to and different from other types of presentations.
2. Participants will be able to list and discuss the components of a poster.
3. Participants will be able to explain why posters can be an effective way to present research results.

Key Points:

- A poster is a visual display of research results usually displayed on a poster board.
- Posters are similar to a research paper in content, with an abstract, the body of the text, figures, tables and other visuals, a conclusion, and references.
- Posters are an effective method for presenting research material because they allow the audience time to assimilate the information, allow for more dialogue between the presenter and participant, and present information in a format more easily understood by many audience members.
- An effective poster will capture the interest of the audience, present information in a user-friendly format and leave the viewer wanting more.

Session Outline:

1. Show Slide 1: Discuss the definition of a poster presentation.
2. Show Slide 2: Discuss why poster sessions are used.
3. Show Slide 3: Discuss the components of a poster.
4. Show Slide 4: Discuss what makes a poster effective.
5. Discuss briefly how posters are laid out and put together.
6. Show sample posters and have students discuss what they like and don't like

about each poster.

Session Notes:

1. Faculty will begin the session by asking students if they have been to a professional conference in the past and what types of presentations were made at the conferences.
2. Faculty can then mention that poster sessions are becoming very popular at conferences, at universities, and on the internet as ways to let the public know about research that is being conducted and the results of that research.
3. Faculty can then show the first slide and talk about what a poster presentation is with a focus on the fact that generally at least one presenter stands next to or near the poster in order to answer questions to individuals who are viewing the materials.
4. Faculty can then show the second slide and discuss some of the reasons that poster sessions can be beneficial and why they are used to present information. Have the students discuss other reasons why poster sessions are useful.
5. Faculty can then show slide three and discuss the different components of posters using the following information:
 - a) Generally the title of the research, the authors' names, and their affiliation is included toward the top of the poster. The title may be shortened from the exact title of the research. The St. Cloud University website advises students to try to keep the title of their poster to ten words or less, with a suggestion of five words. When there is more than one author, use an asterisk (*) behind the name of the author to whom correspondence should be sent.
 - b) The abstract is a very short overview of the research and can highlight a few points about the major purpose of the paper and a brief overview of the organization of the paper. One or two of the major conclusions from the paper can also be included in the abstract. The Lewis-Clark State College in Lewiston, Idaho suggests to students that their abstracts for poster be between 200 and 300 words.
 - c) The body of the text is next. It is important to remember that posters are generally a visual display of information; therefore, the text should support the graphics and not just fill in empty space. The introduction in this section should not simply repeat the abstract. Rather it should contain

two or three sentences that provides some background to the research. The research question addressed through the paper can then be included as well as a brief description of the methodology. Then several findings from the research can be highlighted. The text body should probably be limited to about 20% to 30% of the entire poster.

- d) Figures, tables, and other graphics should be used whenever possible as a means to tell the “story” of the research. These visuals should also be concise, however. For example, don’t include lengthy tables that would take more than just a few minutes to synthesize. The information in these graphics should not be duplicated in the text.
 - e) The conclusion is just as important in a poster presentation as it is in a journal article. The main purpose of the conclusion is to point out the main idea followed with new interpretations or new research areas resulting from this research.
 - f) The reference section should also be kept brief. List only the key references that show expertise in the research area and that support the ideas presented in the poster.
 - g) List all appropriate parties who contributed to the research. For example, the funding source should always be listed. In addition, an advisor whose name does not appear with the authors may be important to list as well as agencies or organization that provided in-kind contributions to the research (such as space to conduct the research, computer assistance, etc.).
6. Faculty can show slide four and then discuss some of factors that make a poster presentation effective. The discussion can also include some of the factors that create problems or make a poster ineffective.
7. Faculty can then briefly discuss some of the considerations that should be made when a poster is actually being laid out and put together. The following points may be useful to review:
- a) Each conference has its own guidelines for the display of posters. These guidelines will let the presenter know what size the poster should be and what materials will be available at the conference. Some conferences will provide a table for the poster to be displayed on. Other conferences will provide a display stand or a panel board that the poster can be displayed on. It is important to know the size limits and how the posters are expected to be displayed. Four feet by eight feet is a standard size for the poster.

- b) The poster should be easily read from a distance of about four to five feet away. The font selected should be a bold, block style that is easily read. The headings should be in a larger font than the text so that they stand out. Several of the web sites listed in the resource section advise their students to use a 16 - 18 point font in the text.
 - c) Empty space should be used in the poster. This will provide a focus for the graphics and will make reading the poster easier. Cutting backing material a little larger than the text or graphic page can also provide a frame for each page, making it easier to read. Each poster page should be a standard letter or legal size page for ease in mounting the page to the poster board.
 - d) Text and the charts and graphs should be laid out in a logical manner. The tiles can be labeled for ease in following the pages in the correct order.
 - e) Velcro or tacks/push pins are common to use when displaying the poster.
 - f) Always take backup materials for setup and repair of the posters. Make certain to have some or all of the following materials available: double stick tape, packing tape, extra matte board or poster board, knife, scissors, tacks or pins, and a handout version of the poster.
8. As a conclusion to this session, the faculty can display several sample posters and have the students discuss what is effective and what is not effective in the poster. Students should also be encouraged to review some of the web sites listed in the resource section, as many of these sites include samples of effective posters and posters that are not as effective.

References and Resources

<http://writing.colostate.edu/references/speaking/poster>

http://stcloudstate.edu/~research/poster_guidelines.html

http://www.muohio.edu/undergradresearch/UR_Posters/index.htmlx

http://www.muohio.edu/undergraduatehttp://www.kumc.edu/SAH/OTEd/jradel/Poster_Presentations

<http://www.lcsc.edu/ss150/posterhow.htm>

<http://jeeves.nichs.nih.gov/nta/LabManual/Poster.html>

WHAT IS A POSTER PRESENTATION?

- **A visual display of research results**
- **Generally includes graphics and narrative**
- **Synthesizes main ideas and findings of research**
- **Displayed on a free-standing bulletin or poster board so that all information can be seen at once**

WHY HAVE POSTER PRESENTATIONS?

- **Researches are available to interact with audience**
- **Provides audience with a chance to assimilate information**
- **Easy to read and visual**
- **Easier for non-researchers to follow**
- **Can serve as the beginning point for a journal article**
- **Allows more research to be included in conferences**
- **Provides more time for research results to be viewed**

COMPONENTS OF A POSTER

1. Title, Authors, and Affiliations
2. Abstract
3. Body of Text
4. Figures and Tables
5. Conclusion
6. References
7. Acknowledgments

WHAT MAKES AN EFFECTIVE POSTER?

- **Attracts an audience**
- **Captures the interest of the audience**
- **User-friendly in format**
- **Is pleasing to look at, yet readable**
- **Leaves the audience wanting to learn more**

INTRODUCTION TO SPSS

Purpose: These two sessions introduce the participants to the statistical data analysis package SPSS – Statistical Package for the Social Sciences, published by SPSS, Inc. in Chicago, Illinois. Participants will learn the basic components of the SPSS system, including the various modules for different levels of statistical analyses, statistical tests, and statistical terminology. Participants will have the opportunity to conduct various descriptive and inferential statistical analyses of small data sets using SPSS computer programs.

Learning Objectives:

1. Participants will learn the basic components of SPSS systems, their terminologies, and their basic differences from other data analysis systems such as SAS.
2. Participants will learn to enter data, enter variable information, and analyze data utilizing SPSS Version 10.0 for Microsoft Windows Versions 95/98/NT/2000.
3. Participants will learn the various types of SPSS system modules, primarily the base system for analyzing descriptive statistics, inferential hypothesis testing, ANOVA, and factor analysis.
4. Participants will be exposed to other SPSS module capabilities as well, including correlation, reliability analysis, regression analysis, and data charts.
5. Participants will learn the six types of SPSS windows: Data Editor, Viewer, Pivot Table Editor, Chart Editor, Text Output Editor, and Syntax Editor. Major emphases will be placed upon the Data Editor and Data Viewer windows.
6. Within each SPSS window, participants will learn to apply menu commands from the Windows toolbar.
7. Participants will analyze data and present the results in the form of histograms, box plots, bar charts, pie charts, etc.

Materials Needed:

PC equipped with SPSS Version 10.0 for Microsoft Windows Versions 95/98/NT/2000
Printer
Calculator
SPSS for Windows manual
Sample data on the computer hard-drive or on diskette/CD

Key Points:

- SPSS represents Statistical Package for the Social Sciences, started in 1968 by SPSS, Inc., whereas SAS represents Statistical Analysis System, started in 1975 by the SAS Institute. These are the two major statistical packages used for data analysis in scientific, educational, and business/industrial research.
- SPSS modules are keenly designed for analyzing survey/questionnaire items, although they provide strong analysis of other data types as well.
- All SPSS statistical applications require the base module that is described in these two sessions. The more advanced modules, which operate from the base module, are the professional statistics module (hierarchical clustering, etc.), advanced statistics module (discriminant analysis), the categories module (dimension-reduction techniques), the tables module (three-dimensional tables), and the trends module (time-series modeling).
- Many other advanced statistical programs can interface with the SPSS base module, further increasing the power of this statistical package. Most of these programs are specifically tailored to work with SPSS and/or SAS base modules.
- SPSS has six window types: Data Editor, Data/Variable Viewer, Pivot Table Editor, Chart Editor, Text Output, and Syntax Editor.
- Upon opening SPSS, the researcher will see the Data Editor window. Using the Variable View spreadsheet, variable information (decimal spaces, label designations for certain numbers, etc.) can be entered or changed at a later time.
- Data types for each variable may be several different types of numeric data, such as regular numeric data, scientific notation, and dollar amounts, or string data for any keyboard symbol.
- Using the Data View spreadsheet, data can be entered in each cell of the spreadsheet.
- Excel and other database files may be easily transferred into SPSS format.
- The Analyze command enables the user to perform many different descriptive and inferential statistical procedures.
- The Analyze command opens a subcommand directory that includes Descriptive Statistics, Custom Tables, Compare Means (Hypothesis Testing), General Linear Model, Correlate, Regression, Scale, Nonparametric Tests, etc. Each of these subcommand directories opens into specific procedures. For example, Nonparametric Tests opens into Chi-Square, Binomial analysis, etc.

- Inferential statistical analyses are of many forms. The most commonly used include the t-test, Analysis of Variance (ANOVA), and the Chi-Square test.
- SPSS enables the user to display data in the form of many different graphs and charts, including bar charts, line charts, pie charts, boxplots, scatterplots, histograms, etc.

Session One Outline:

1. Discuss SPSS and its capabilities, as well as distinguish between SPSS and SAS, another major statistical program. Show slides 1-4.
2. Discuss the six SPSS windows, with special attention to the Data editor, viewer, and output windows. Show slides 5-6.
3. Describe data set-up and entry in SPSS Data View. Show slides 7-9.
4. Describe the four principal variable types. Show slide 10.
5. Describe variable naming and specifications for labels, data types, etc. Show slides 11-13.
6. Discuss the types of numerical data, string data and the specification of data type. Show slides 14-22.
7. Demonstrate how to read Excel and other database files in SPSS. Show slides 23-24.
8. Discuss data entry and modifications in the Data View Editor window. Show slides 25-35.
9. Discuss various approaches to sorting, transforming, and computing data, including one computational example. Show slides 36-42.

Session Two Outline:

1. Provide an overview of the SPSS data editor toolbar command Analyze. Show slides 43-45.
2. Describe descriptive statistic options and output charts. Show slides 46-55.
3. Explain the major types and purposes of inferential statistics. Show slides 56-57.

4. Explain t-tests, the difference between independent and paired samples (i.e., non-independent) t-tests, and SPSS applications for each test. Show slides 58-62.
5. Summarize ANOVA, Chi-Square, Correlation, Reliability, and other statistical options. Show slides 63-68.
6. Discuss important considerations in thinking through an SPSS application before and after conducting it. Show slides 69-70.
7. Demonstrate graphing and charting applications. Show slides 71-81.
8. Final thoughts – emphasize the extensive SPSS program tutorial and help boxes that explain and provide examples for each statistical function. Show slides 82-83.

Session One Notes:

1. Faculty will begin this session describing the advantages of elaborate statistical programs for handling statistical analyses. Faculty will distinguish between the two major statistical program providers, SPSS and SAS, pointing out the strengths of each and why some researchers may prefer one over the other. Overall, the differences are minimal, and most researchers can comfortably navigate from one system to the other. Furthermore, most advanced statistical software packages are designed to operate with data from either SPSS or SAS.
2. Faculty will emphasize aspects of the SPSS version 10.0 base module, including the six window types: Data editor, Viewer, Pivot Table Editor, Chart Editor, Text Output, and Syntax Editor. Special attention will be given to the Data Editor, Viewer, and Output windows.
3. Faculty will guide students through variable specifications, data entry, and data transformations in Session One. Students should see the ease of alternating between the Data View and Variable View icons at the bottom of the SPSS Data Editor spreadsheet.
4. Faculty will demonstrate that spreadsheet rows represent individual cases, whereas spreadsheet columns represent variables. Students will be able to click on a spreadsheet cell with the computer mouse and then type in data.
5. With the Data Editor Variable View, faculty will guide students through the methods for naming and specifying variables as well as for defining each variable's characteristics. Faculty will describe the types of variables (nominal, ordinal, interval, and ratio), the fact that SPSS variable names are limited to eight characters in length, data type (numeric or string), and variable labels (each variable label may be up to 255 characters). Distinguish between variable name and variable label.

6. Faculty will clarify the different numeric variable types as well as the difference between numeric and string variables. Faculty will also show how a researcher can specify data value labels for each numeric data entry using the Data Editor Variable View.
7. Faculty will demonstrate how SPSS can read other database files, including Excel files. For Excel files, mention should be made of the dialog checkbox that enables the reading of variable names from the first row of the Excel data. Besides the presentation slides with their illustrations of these procedures, it would be ideal if the faculty member actually demonstrated this transfer and other SPSS actions with a classroom laptop computer and computer screen.
8. Faculty will demonstrate the insertion and deletion of cases and variables. Additionally, faculty will show how to sort cases by specified variables. Data will be computed, counted, recoded, and ranked as additional data transformation demonstrations.

Session Two Notes:

1. Faculty will distinguish between descriptive and inferential statistics. Emphasis will be placed upon the Data Editor Analyze toolbar command.
2. Faculty will illustrate applications of the Descriptive Statistics subcommand, including subcommand options, dialog boxes, and instructions for specifying desired statistics in the data output. The Output Viewer window will emerge as an important component of this session.
3. Faculty will provide students with an overview of inferential statistics, including summaries for the purposes of a researcher using independent and non-independent t-tests, Analysis of Variance (ANOVA), and the Chi-Square test.
4. Faculty will guide students step-by-step through the Analyze toolbar command directories for analyzing sample data, first with the t-test for paired samples (non-independent), then with the t-test for independent samples. Ideally, faculty should have a portable computer and screen to demonstrate actual hypothesis testing with real data in addition to the slide presentation. Furthermore, faculty should prepare real or artificial data sets on diskette for latter student practice.

5. Faculty will demonstrate steps for conducting ANOVA and Chi-Square analyses of sample data. Due to time considerations, faculty may option to provide an overview or go into more detail on other statistical applications, including correlation, reliability analysis, regression analysis, etc. These applications and their uses should be mentioned.
6. Faculty will demonstrate charting and graphing using the Graphs toolbar command and its subcommand directory. Bar charts, line charts, and pie charts are discussed, but other selections (histograms, etc.) may be discussed as well.
7. Faculty will conclude the session with a discussion of help sources for using SPSS, including the campus computing center, the SPSS program tutorial, and the SPSS program dialog Help boxes.

REFERENCES

Books

- Gay, L.R. & Airasian, P.W. (1999). Educational research: competencies for analysis and application, 6th ed. Upper Saddle River, NJ: Prentice-Hall.
- Jaeger, R.M. (1990). Statistics: a spectator sport, 2nd ed. Newbury Park, CA: SAGE.
- Norusis, M.J. (1990). SPSS advanced statistics student guide. Chicago, IL: SPSS, Inc.
- Norusis, M.J. (1993). SPSS for Windows base system user's guide, release 6.0. Chicago, IL: SPSS, Inc.
- Pedhazur, E.J. (1982). Multiple regression in behavioral research. Fort Worth, TX: Harcourt Brace College Publishers.
- SPSS (1990). SPSS reference guide. Chicago, IL: SPSS, Inc.

Web Sites

- <http://www.spss.com/>
- <http://www.indiana.edu/~statmath/stat/spss/>
- <http://www.utexas.edu/cc/stat/software/spss/>
- <http://trochim.human.cornell.edu/>
- <http://7-12educators.about.com/msub11.htm>

Introduction To SPSS

Session One Basics

What Is SPSS?

- SPSS is an acronym: Statistical Package for the Social Sciences.
- It was developed in 1968 at SPSS, Inc. In Chicago, Illinois.
- It enables the user to analyze data for descriptive and inferential statistics, as well as for graphs and chart construction.

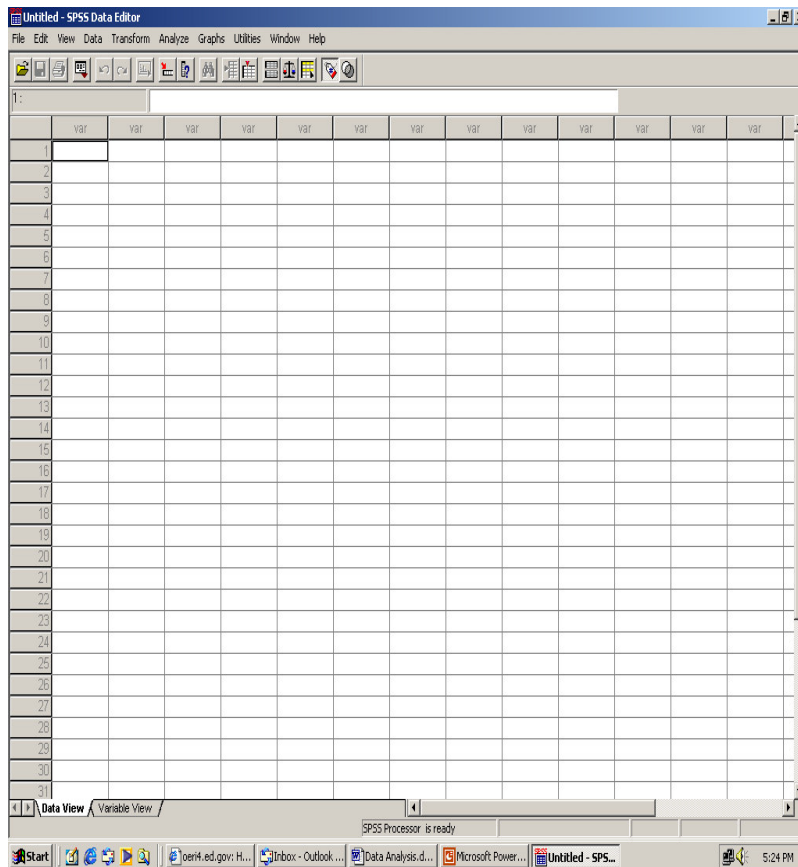
More About SPSS

- SPSS is a robust statistical analysis system.
- It is ideal for analyzing questionnaire and survey data.
- It utilizes a base module for descriptive and inferential statistics, plus other, more advanced modules to run from this base module.

SPSS Platforms

- SPSS is available on Windows, Macintosh, and mainframe platforms.
- The current version, SPSS 11.0, is available only on Windows 95/98/NT/2000.
- At most colleges, you may access SPSS through the Campus Computer Center or by purchasing a stand-alone version for your personal computer.

SPSS Windows



- SPSS has six window types:
 - a. Data editor
 - b. Viewer
 - c. Pivot Table Editor
 - d. Chart Editor
 - e. Text Output
 - f. Syntax Editor

Data Editor Window

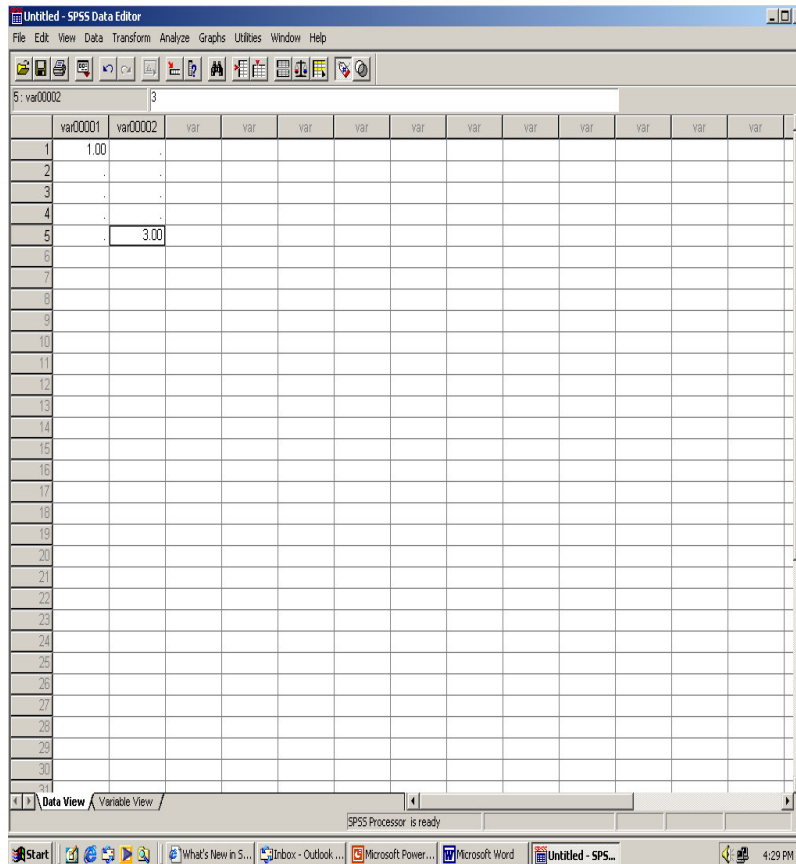
- When you start SPSS, the first screen that you see is the Data Editor Window.
- Like each of the SPSS windows, the Data Editor Window has a toolbar that includes the following sets of menus:

File	Edit	View	Data.
Transform	Analyze	Graphs.	
Utilities	Window	Help.	

Data Set-up

- Data are entered in the cells on an SPSS spreadsheet having “Data View” and “Variable View” sheets.
- Numbered rows represent individual cases, such as person/subject 1, 2, 3, ... etc.
- Columns represent variables, such as gender, birthdate, SAT score, etc.

Entering Data in Data View



- To enter data, click on a cell and type in the value.
- In this example, the value 3.00 is entered into the highlighted cell for variable var00002, case 5.
- The value 1.00 had already been entered in the un-highlighted cell for var00001, case 1.

Important Considerations

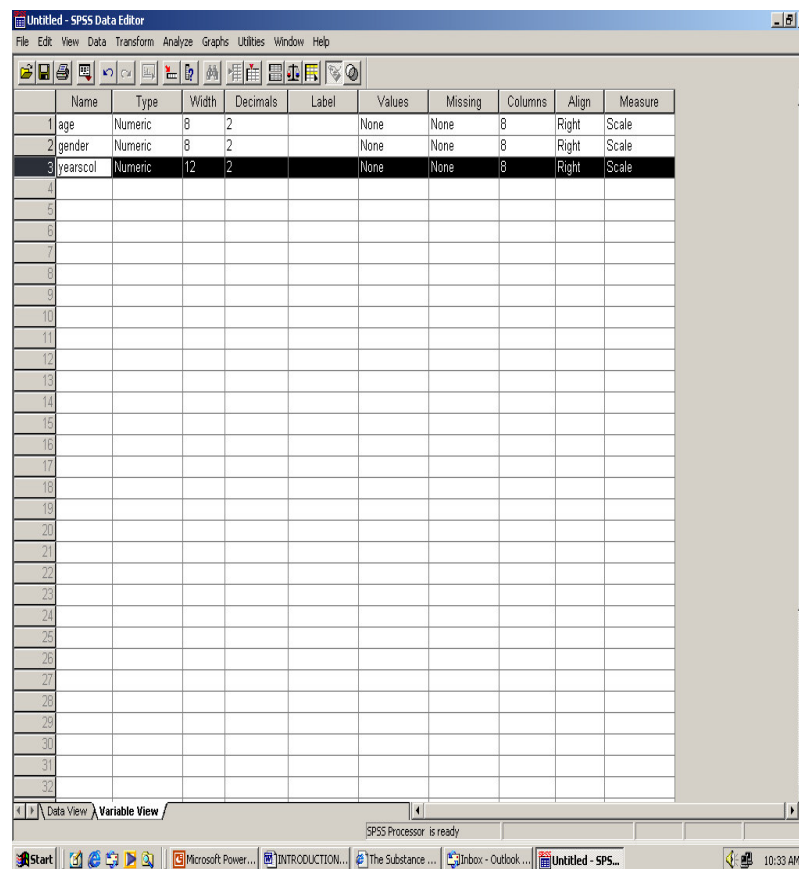
- Define the variables for your study.
- Remember that a variable is a characteristic or behavior that may be different from case to case.
- Example variables:
Gender: Female or Male.
Age: 0-123.
Level of Happiness: 1-7 (Low-High).

Variable Types

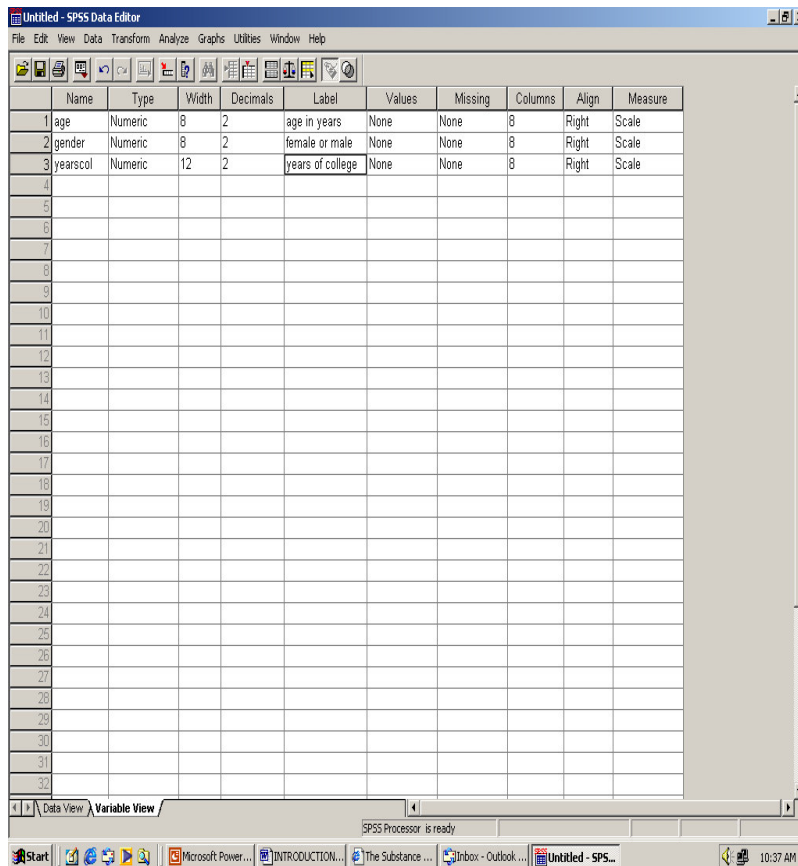
- In statistics, there are 4 basic variable types:
 - a. Nominal = categories (eye color, gender, etc.).
 - b. Ordinal = increasing values.
 - c. Interval = value ranges are the same across the scale.
 - d. Ratio = value ranges are the same across the scale and there is a true zero value. A true zero is total absence of a measured trait.

Variable Names

- In the Data Editor Variable View sheet, click on the cell under Name for each numbered variable.
- Type in the name up to eight characters.



Variable Labels



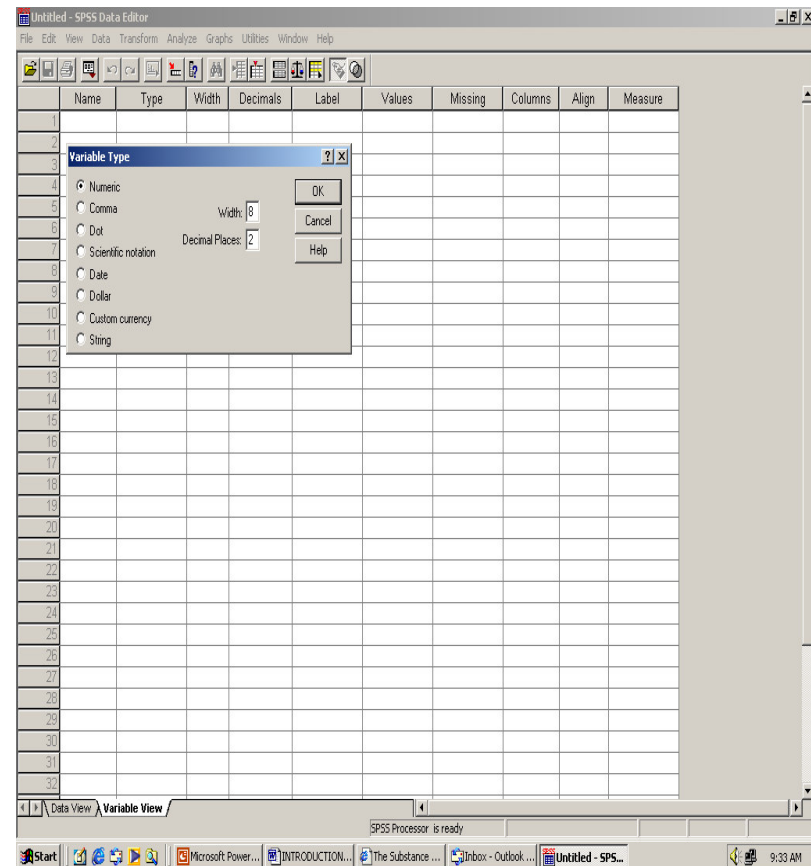
- Under the Variable View Label column, click on the corresponding cell for a variable and type in a description.
- The label may be up to 255 characters long!

Data Types

- Data is entered into spreadsheet cells.
- In the Variable View sheet, the data type for a given variable can be specified.
- For practical purposes, there are two basic types of data:
 1. Numeric, with several variations.
 2. String.

Numeric Data

- As the name indicates, numeric data is numbers.
- In Variable View under data type, various numeric data forms can be specified for each variable.

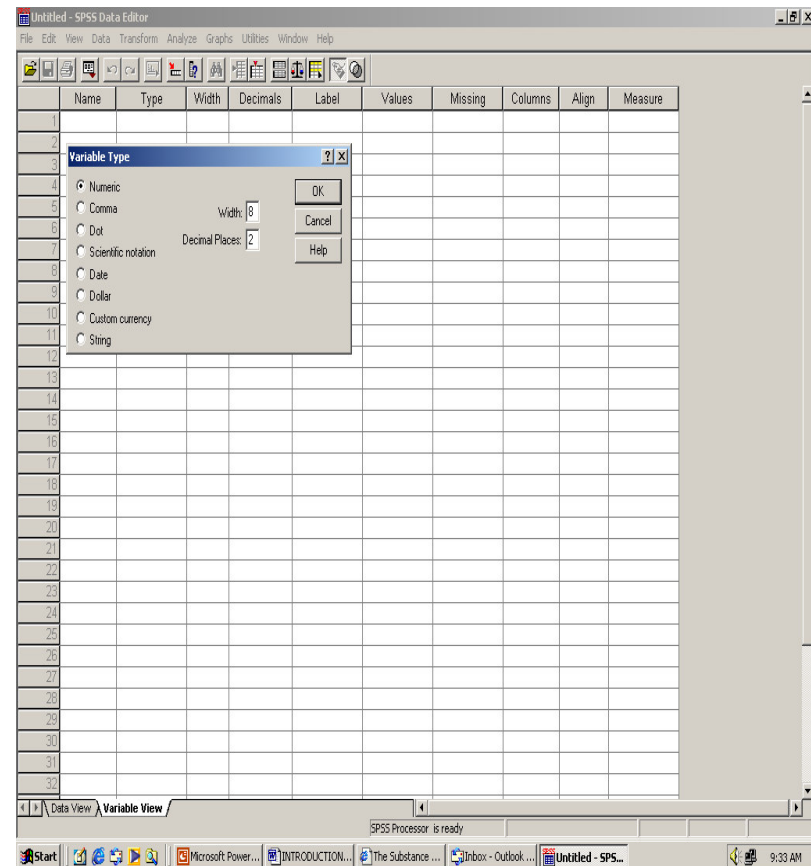


Some Numeric Data Types

- Regular Numeric Data, such as 2000.
- Numeric Data with commas, such as 2,000.
- Dot Format, such as 2.000,00 where dots separate thousands and commas are decimals.
- Scientific Notation, such as 2×10^3 .
- Date, such as 01-01-2000.
- Dollar amounts, such as \$2,000.00.
- Custom currency.

Specifying Data Type

- In Variable View, click on the cell.
- A gray scroll box will appear in the right side of the cell.
- Click on the scroll box and a dialog box will appear.

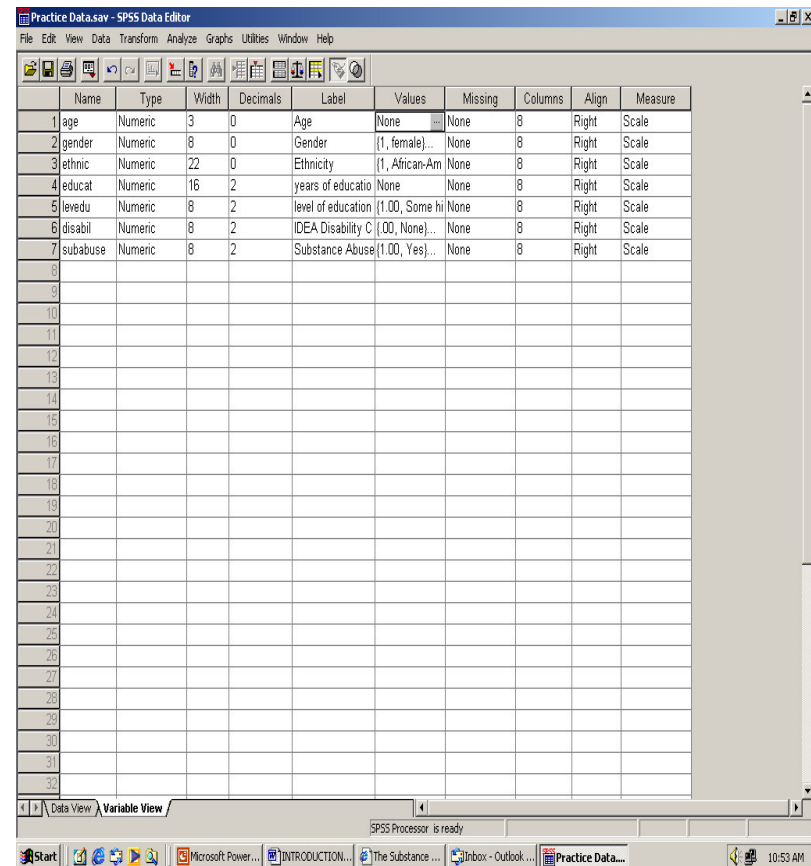


String Data

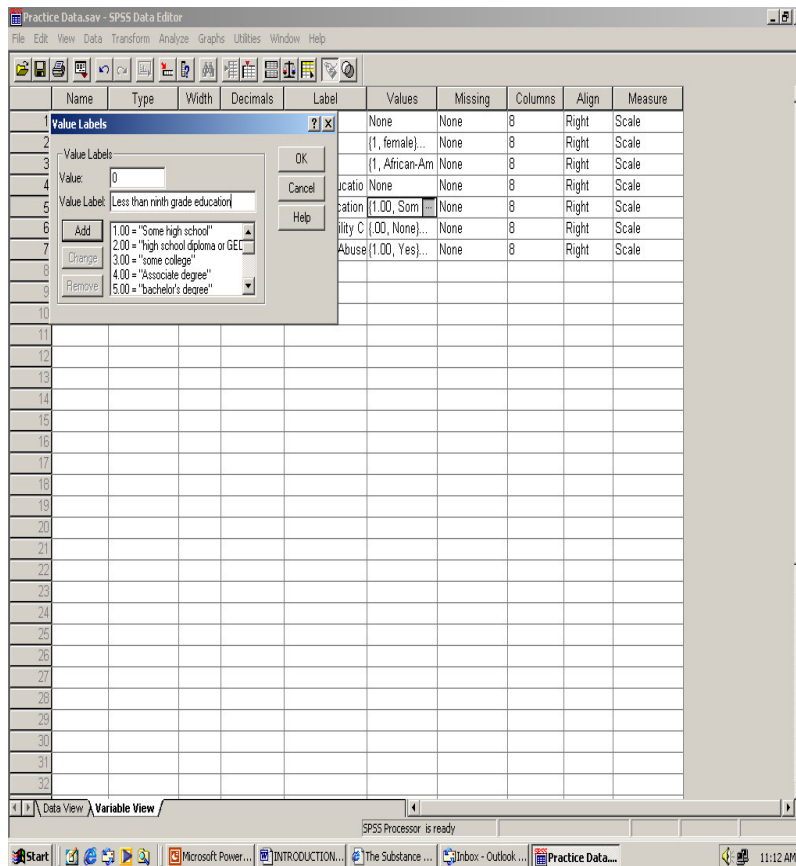
- String variables can be names, symbols, or most other keyboard items.
- They are also called alphanumeric variables.
- Upper and lower case letters are considered to be distinct in this format.

Data Value Labels

- Still in Variable View under the Value column, click on a cell for a given variable.
- The default value is “none,” which means that when you enter data under Data View, just type in numbers.

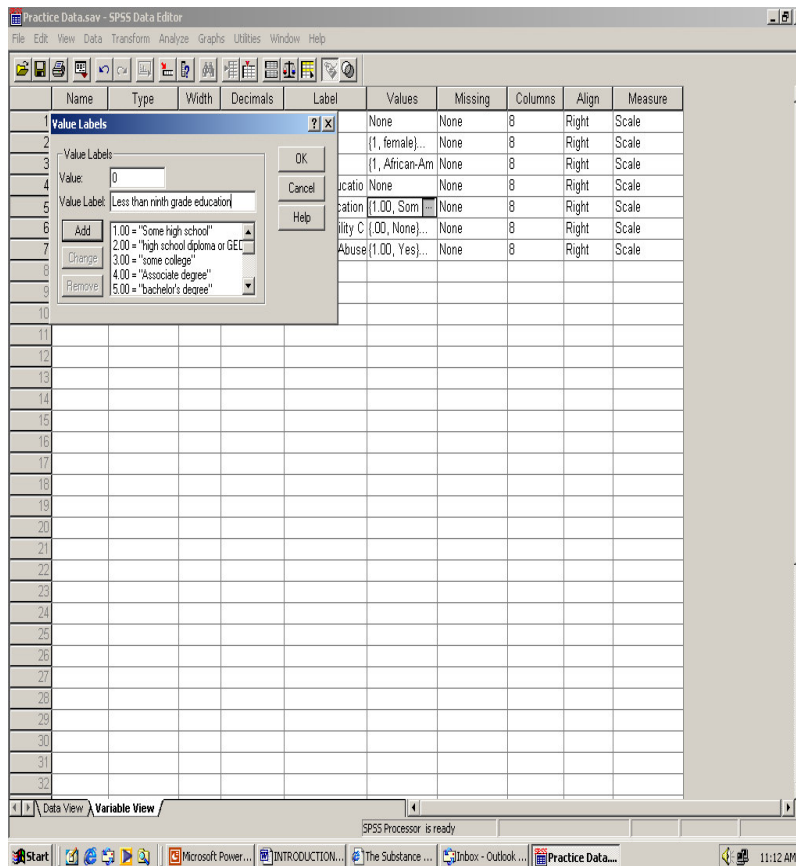


Data Value Labels



- If you wish for a numeric value to indicate a specific nominal characteristic, such as “1 = some high school” for level of education, click on the gray box on the right side of a variable cell under the Value column.

Data Value Labels



- You may type in a value and a value label in the indicated boxes.
- Then click on the “Add” box.
- You may keep adding successive values and labels.
- Click “OK” when finished.

Data Value Labels

	age	gender	ethnic	educat	levedu	disabil	subabuse	var	var	var	var	var	var
1	21	female	African-	16.00	bachelor'	None	No						
2	21	male	Caucasi	15.00	Associat	specific l	Yes						
3	19	female	Caucasi	12.00	high sch	None	No						
4	18	female	Caucasi	12.00	high sch	None	No						
5	20	male	African-	14.00	Associat	speech	No						
6	19	male	Hispanic	13.00	some co	None	No						
7	25	male	Caucasi	14.00	some co	None	Yes						
8	18	female	Caucasi	12.00	high sch	serious	Yes						
9	19	female	Caucasi	13.00	some co	None	No						
10	21	male	African-	14.00	Associat	None	No						
11	20	female	African-	12.00	high sch	None	No						
12	18	male	Native A	12.00	high sch	None	No						
13	20	male	Caucasi	10.00	Some hi	specific l	Yes						
14	20	female	Caucasi	12.00	high sch	None	No						
15	22	female	Hispanic	11.00	Some hi	multiple	No						
16	21	male	African-	12.00	high sch	None	Yes						
17	19	female	Caucasi	12.00	high sch	None	No						
18	23	female	Multicult	14.00	Associat	None	No						
19	28	male	Caucasi	16.00	bachelor'	None	No						
20	19	female	Caucasi	13.00	some co	None	Yes						
21	22	female	Asian	16.00	bachelor'	None	No						
22	18	female	Caucasi	12.00	high sch	visual im	No						
23	21	female	Asian	14.00	some co	None	No						
24	20	male	Caucasi	13.00	some co	None	Yes						
25	18	female	Caucasi	12.00	high sch	None	No						
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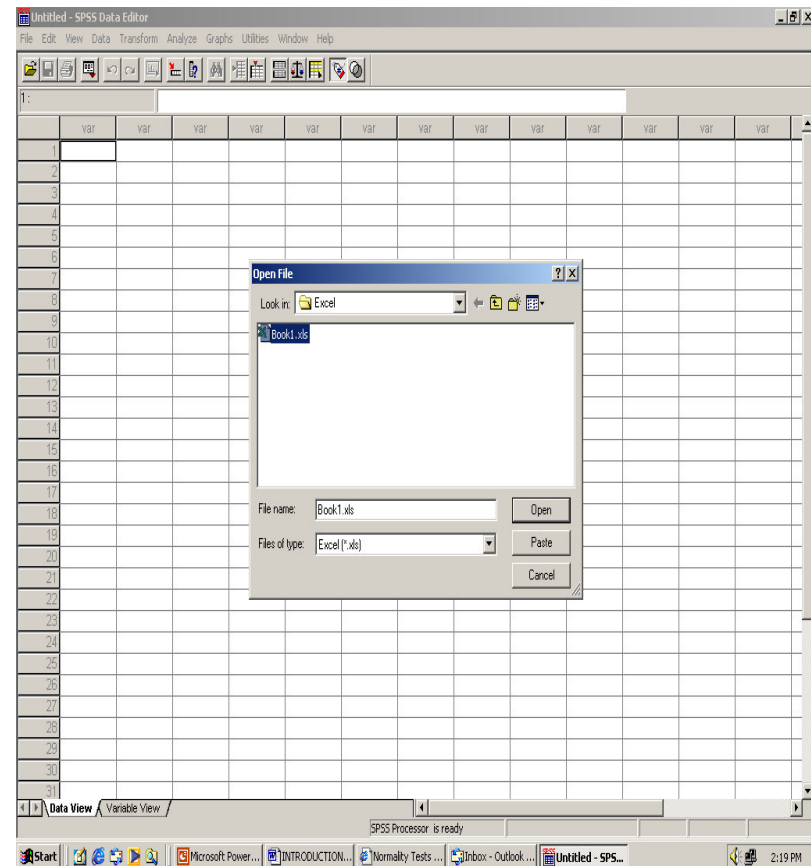
- In Data View for the variable column, the value label will appear when you type in the corresponding number.
- You may also use the arrow key box to enter the data.

Other Variable Attributes

- You may Copy and Paste variable attributes to other Variable columns.
- Also in Variable View, there are columns for Data Width and Decimal places. In the appropriate variable cell, use the up and down arrows to adjust these data traits.
- You may specify Missing values for each variable. The default value is “None.”

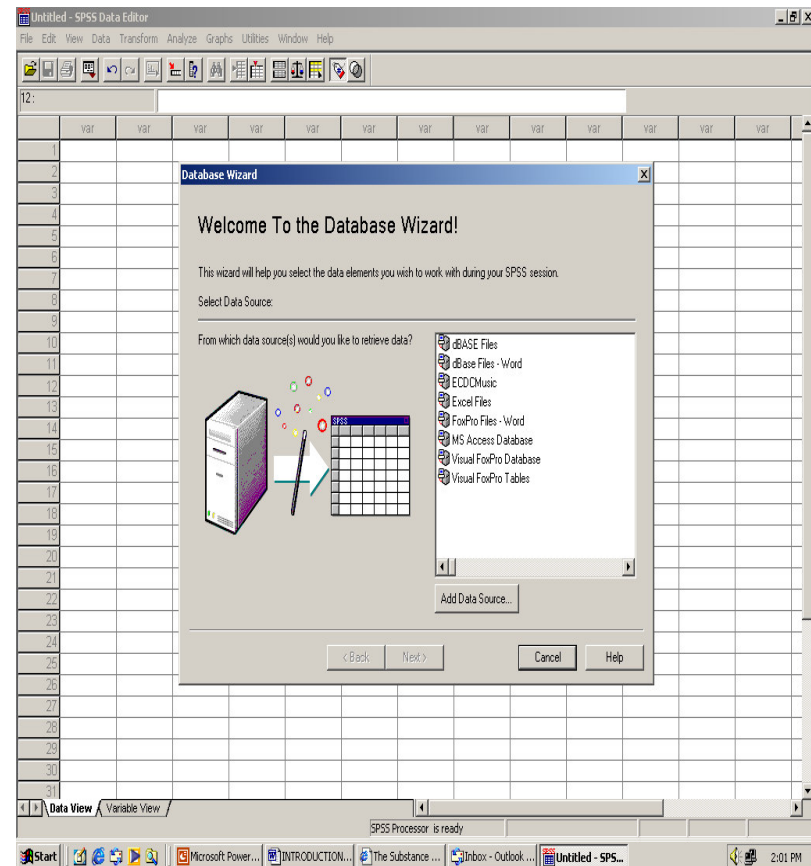
Reading Excel Files in SPSS

- Click on File in Data View.
- Click Open. Click Data.
- A dialog box appears.
- Look in a folder.
- Select file name & type, then Open.
- Another dialog checkbox enables SPSS to read variable names from the first row of Excel data.



Reading Any Database

- Click File.
- Click Open Database, then New Query.
- The Database Wizard dialog box will emerge, providing a list of data sources.
- You may add data sources/files as well.



Data View

Practice Data.sav - SPSS Data Editor

File Edit View Data Transform Analyze Graphs Utilities Window Help

26 : gender

	age	gender	ethnic	educat	levedu	disabil	subabuse	var	var	var	var	var	var
12	18	male	Native A	12.00	high sch	None	No						
13	20	male	Caucasi	10.00	Some hi	specific I	Yes						
14	20	female	Caucasi	12.00	high sch	None	No						
15	22	female	Hispanic	11.00	Some hi	multiple	No						
16	21	male	African-	12.00	high sch	None	Yes						
17	19	female	Caucasi	12.00	high sch	None	No						
18	23	female	Multicult	14.00	Associat	None	No						
19	28	male	Caucasi	16.00	bachelor'	None	No						
20	19	female	Caucasi	13.00	some co	None	Yes						
21	22	female	Asian	16.00	bachelor'	None	No						
22	18	female	Caucasi	12.00	high sch	visual im	No						
23	21	female	Asian	14.00	some co	None	No						
24	20	male	Caucasi	13.00	some co	None	Yes						
25	18	female	Caucasi	12.00	high sch	None	No						
26	22						
27		female											
28		male											
29													
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Data View Variable View

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Inserting Data

- For each case, click on the appropriate cell directly underneath each variable and type the value measured for that subject for that particular variable.
- Most likely, you will be entering data directly from a completed survey instrument.

Inserting Data

- If you have set up your variables correctly using Variable View, then the data entry should proceed with ease.
- On questionnaire data, make sure that you have planned the arrangement of variables for straightforward data entry and convenience for later analysis.

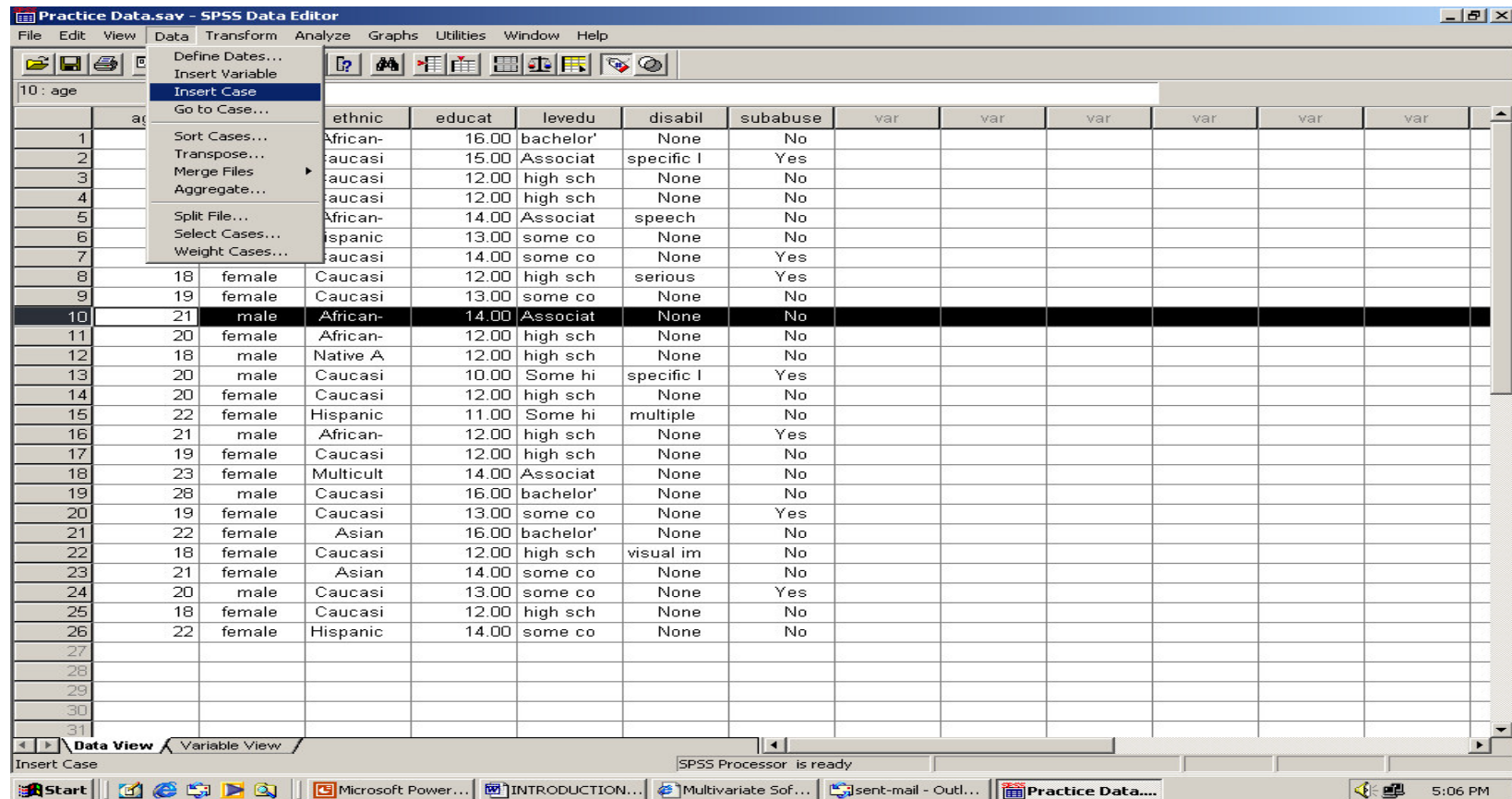
Inserting Data

- Watch out for:
 1. Reverse-scored items.
 2. Consistency in across-variable attributes:
Is 1=Yes and 2=No in all such variables?
 3. Consistency in missing data: If there is no data, leave the cell blank.

Modifying Data

- Under the Data View toolbar, the Data menu contains several subcommands, including Insert Cases and Insert Variables.
- To insert new cases within the database, say between cases 9 and 10, click on case 10 at the far left of the spreadsheet, thus highlighting the case.
- Then, click on Data, then Insert Case.
- There will be a new case 10 with blank cells to fill, whereas the former case 10 becomes case 11 and all other cases are shifted up a number.

Insert Case



Case Inserted

Practice Data.sav - SPSS Data Editor

File Edit View Data Transform Analyze Graphs Utilities Window Help

10 : age

	age	gender	ethnic	educat	levedu	disabil	subabuse	var	var	var	var	var	var
1	21	female	African-	16.00	bachelor'	None	No						
2	21	male	Caucasi	15.00	Associat	specific I	Yes						
3	19	female	Caucasi	12.00	high sch	None	No						
4	18	female	Caucasi	12.00	high sch	None	No						
5	20	male	African-	14.00	Associat	speech	No						
6	19	male	Hispanic	13.00	some co	None	No						
7	25	male	Caucasi	14.00	some co	None	Yes						
8	18	female	Caucasi	12.00	high sch	serious	Yes						
9	19	female	Caucasi	13.00	some co	None	No						
10													
11	21	male	African-	14.00	Associat	None	No						
12	20	female	African-	12.00	high sch	None	No						
13	18	male	Native A	12.00	high sch	None	No						
14	20	male	Caucasi	10.00	Some hi	specific I	Yes						
15	20	female	Caucasi	12.00	high sch	None	No						
16	22	female	Hispanic	11.00	Some hi	multiple	No						
17	21	male	African-	12.00	high sch	None	Yes						
18	19	female	Caucasi	12.00	high sch	None	No						
19	23	female	Multicult	14.00	Associat	None	No						
20	28	male	Caucasi	16.00	bachelor'	None	No						
21	19	female	Caucasi	13.00	some co	None	Yes						
22	22	female	Asian	16.00	bachelor'	None	No						
23	18	female	Caucasi	12.00	high sch	visual im	No						
24	21	female	Asian	14.00	some co	None	No						
25	20	male	Caucasi	13.00	some co	None	Yes						
26	18	female	Caucasi	12.00	high sch	None	No						
27	22	female	Hispanic	14.00	some co	None	No						
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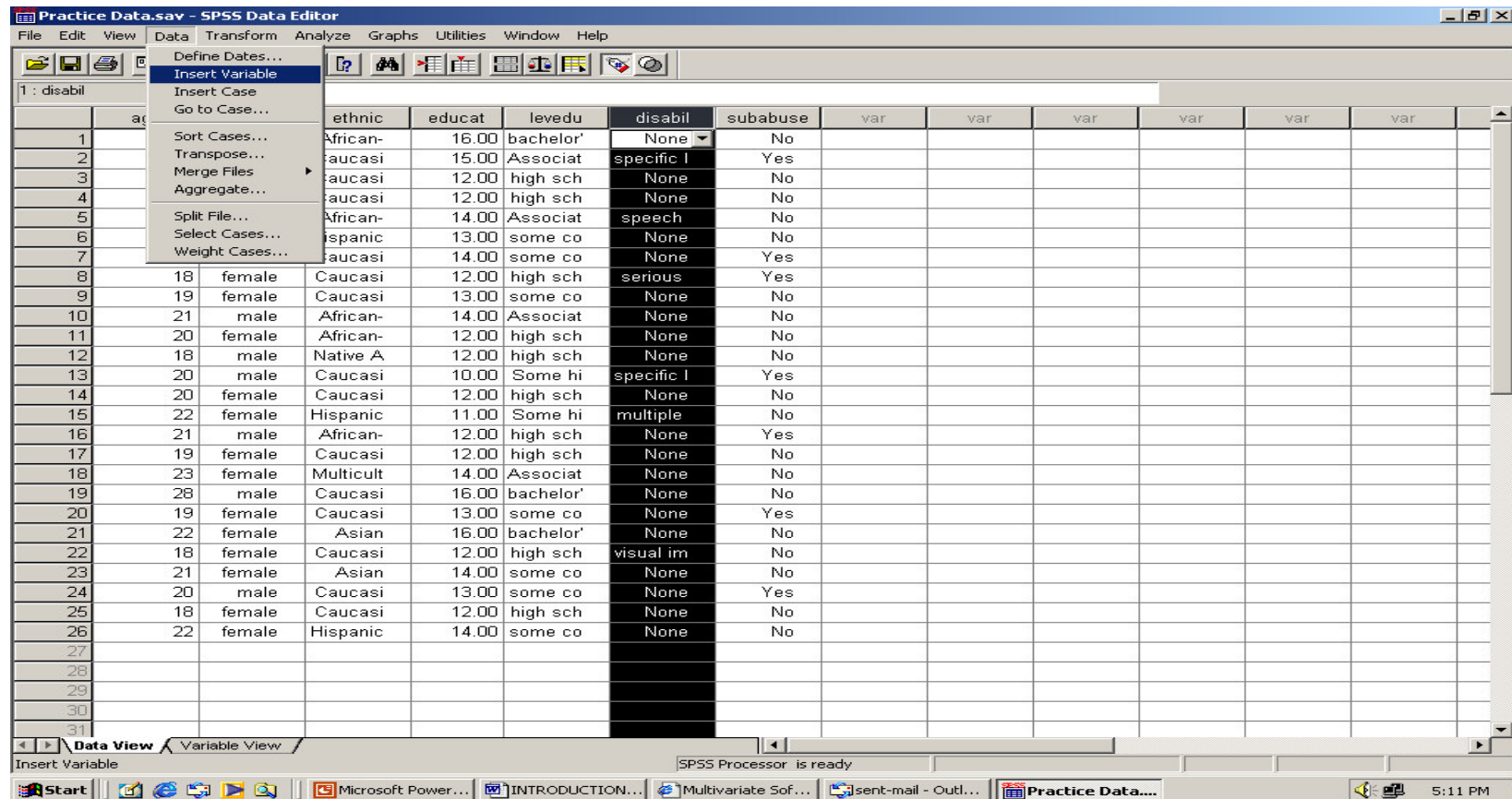
Data View Variable View

SPSS Processor is ready

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5:07 PM

Insert Variable



Variable Inserted

Practice Data.sav - SPSS Data Editor

File Edit View Data Transform Analyze Graphs Utilities Window Help

1 : var00003

	age	gender	ethnic	educat	levedu	var00003	disabil	subabuse	var	var	var	var	var
1	21	female	African-	16.00	bachelor'	.	None	No					
2	21	male	Caucasi	15.00	Associat	.	specific l	Yes					
3	19	female	Caucasi	12.00	high sch	.	None	No					
4	18	female	Caucasi	12.00	high sch	.	None	No					
5	20	male	African-	14.00	Associat	.	speech	No					
6	19	male	Hispanic	13.00	some co	.	None	No					
7	25	male	Caucasi	14.00	some co	.	None	Yes					
8	18	female	Caucasi	12.00	high sch	.	serious	Yes					
9	19	female	Caucasi	13.00	some co	.	None	No					
10	21	male	African-	14.00	Associat	.	None	No					
11	20	female	African-	12.00	high sch	.	None	No					
12	18	male	Native A	12.00	high sch	.	None	No					
13	20	male	Caucasi	10.00	Some hi	.	specific l	Yes					
14	20	female	Caucasi	12.00	high sch	.	None	No					
15	22	female	Hispanic	11.00	Some hi	.	multiple	No					
16	21	male	African-	12.00	high sch	.	None	Yes					
17	19	female	Caucasi	12.00	high sch	.	None	No					
18	23	female	Multicult	14.00	Associat	.	None	No					
19	28	male	Caucasi	16.00	bachelor'	.	None	No					
20	19	female	Caucasi	13.00	some co	.	None	Yes					
21	22	female	Asian	16.00	bachelor'	.	None	No					
22	18	female	Caucasi	12.00	high sch	.	visual im	No					
23	21	female	Asian	14.00	some co	.	None	No					
24	20	male	Caucasi	13.00	some co	.	None	Yes					
25	18	female	Caucasi	12.00	high sch	.	None	No					
26	22	female	Hispanic	14.00	some co	.	None	No					
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Data View Variable View

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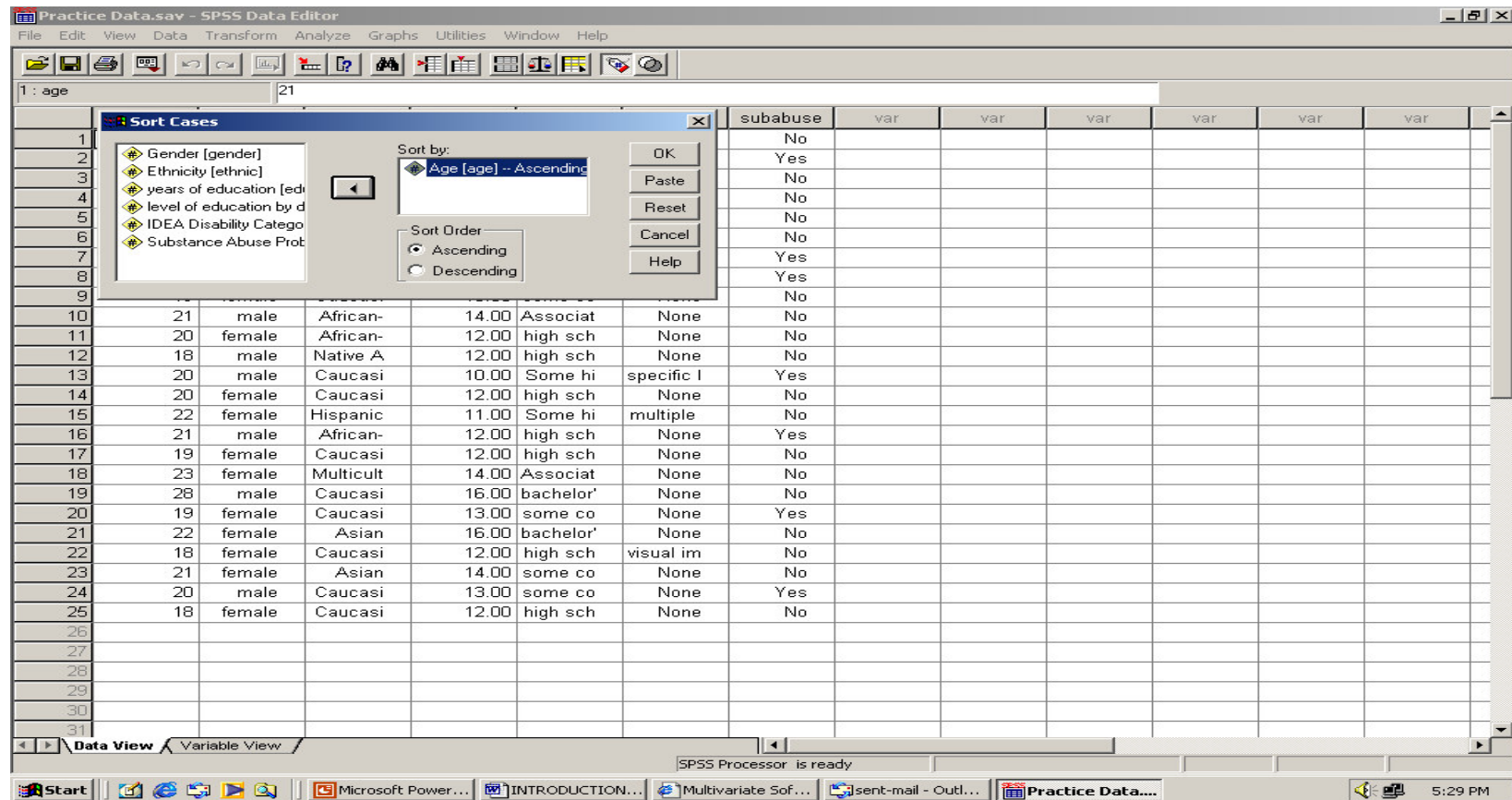
Data

- With a new variable inserted, input data into the cells matching the correct cases, then switch to Variable View to fill in the variable values discussed earlier.
- To delete variables or cases, click/highlight the column or row, respectively, and hit the Delete button on the keyboard. If you immediately change your mind, select Edit, then Undo Deleted Variables (or Cases).

Data

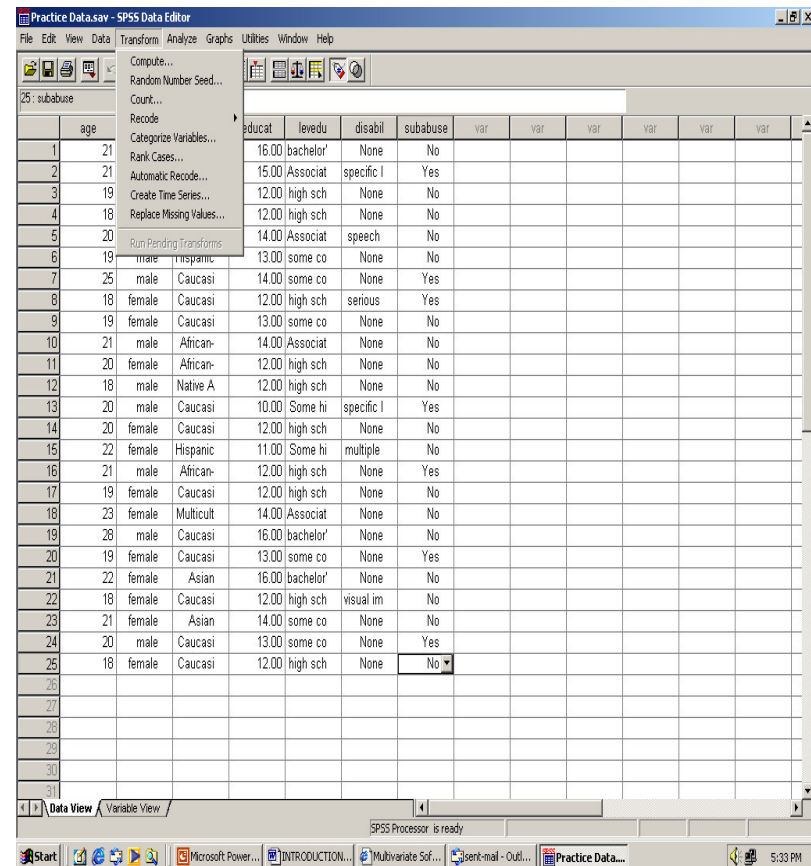
- Additional options under the Data menu include Sort, Select, and Weight Cases and Merge Files into additional Variables + Cases.
- Selecting these commands opens a dialog box with instructions.

Sort Cases

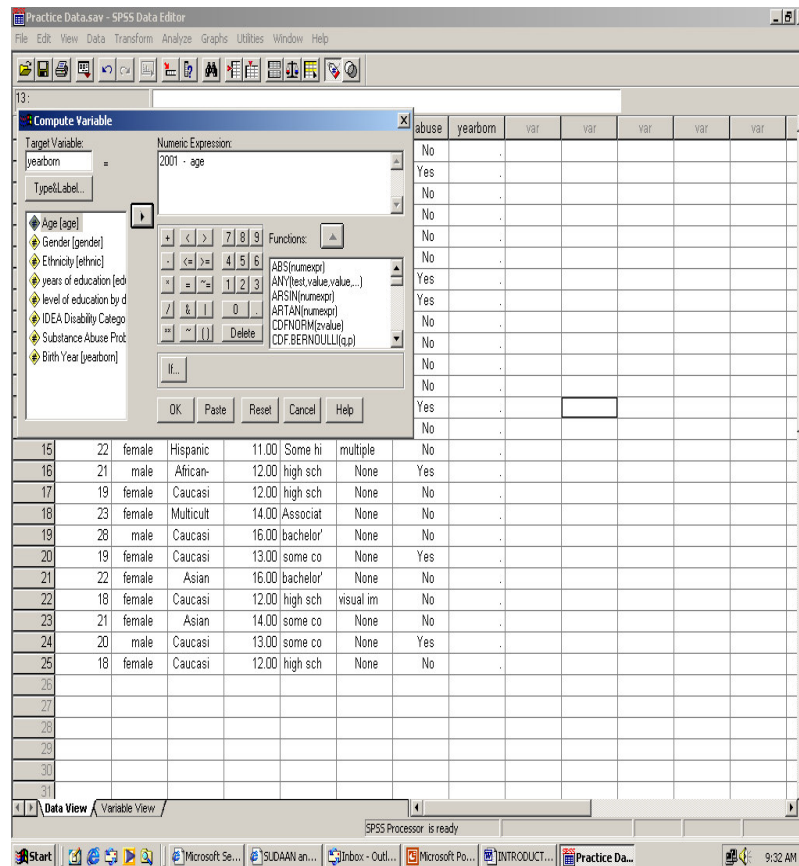


Transforming Data

- Compute
- Count
- Recode
- Categorize Variables
- Rank Cases
- Replace Missing Values

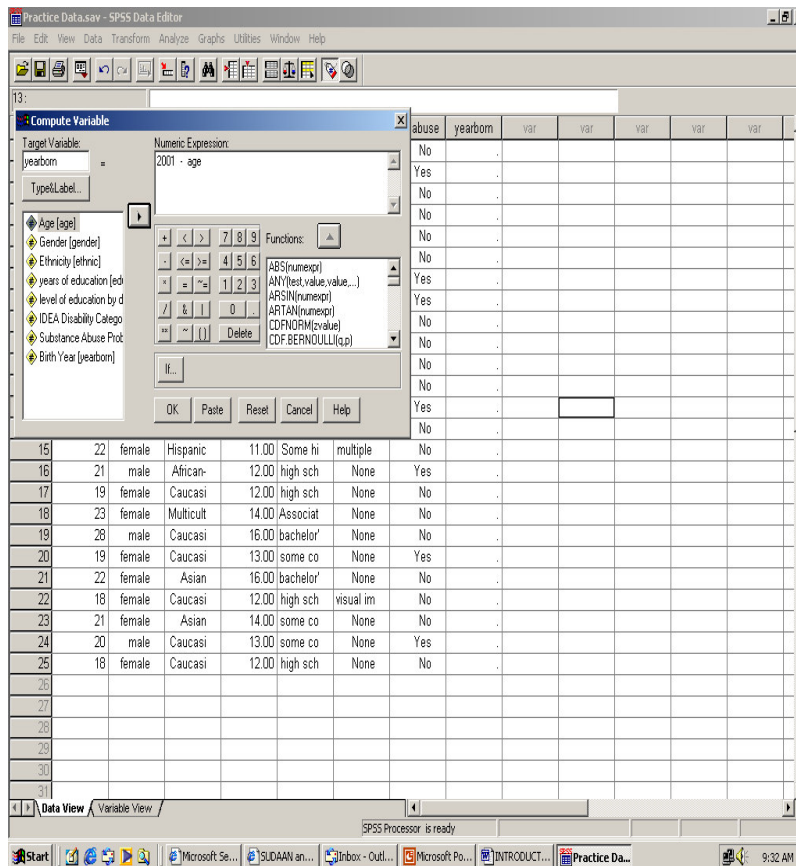


Computing Data



- The Compute command opens a dialog box in which one may pull up mathematical operations (e.g., mean, sum) or type in a calculation.
- A new variable can be created by mathematical modification of an existing variable(s).

Computing Data



- In this example, a new variable Yearborn is calculated by subtracting the age column data from 2001, the year the data was collected.
- $2001 - \text{age} = \text{yearborn}$
- Click OK in the dialog box and the new column of data will be created.

Computing Data

	age	gender	ethnic	educat	levedu	disabil	subabuse	yearborn	var	var	var	var	var
1	21	female	African-	16.00	bachelor'	None	No	1980					
2	21	male	Caucasi	15.00	Associat	specific l	Yes	1980					
3	19	female	Caucasi	12.00	high sch	None	No	1982					
4	18	female	Caucasi	12.00	high sch	None	No	1983					
5	20	male	African-	14.00	Associat	speech	No	1981					
6	19	male	Hispanic	13.00	some co	None	No	1982					
7	25	male	Caucasi	14.00	some co	None	Yes	1976					
8	18	female	Caucasi	12.00	high sch	serious	Yes	1983					
9	19	female	Caucasi	13.00	some co	None	No	1982					
10	21	male	African-	14.00	Associat	None	No	1980					
11	20	female	African-	12.00	high sch	None	No	1981					
12	18	male	Native A	12.00	high sch	None	No	1983					
13	20	male	Caucasi	10.00	Some hi	specific l	Yes	1981					
14	20	female	Caucasi	12.00	high sch	None	No	1981					
15	22	female	Hispanic	11.00	Some hi	multiple	No	1979					
16	21	male	African-	12.00	high sch	None	Yes	1980					
17	19	female	Caucasi	12.00	high sch	None	No	1982					
18	23	female	Multicult	14.00	Associat	None	No	1978					
19	28	male	Caucasi	16.00	bachelor'	None	No	1973					
20	19	female	Caucasi	13.00	some co	None	Yes	1982					
21	22	female	Asian	16.00	bachelor'	None	No	1979					
22	18	female	Caucasi	12.00	high sch	visual im	No	1983					
23	21	female	Asian	14.00	some co	None	No	1980					
24	20	male	Caucasi	13.00	some co	None	Yes	1981					
25	18	female	Caucasi	12.00	high sch	None	No	1983					
26													
27													
28													
29													
30													
31													

- Here is the result.
- You may go into Variable View to adjust variable names and characteristics at any time.

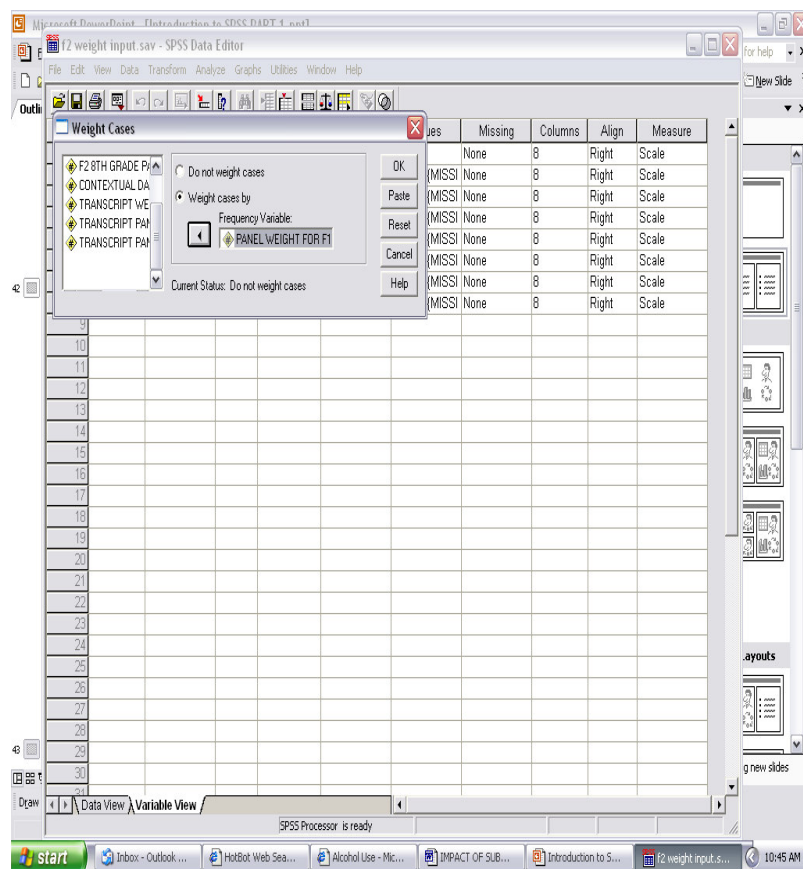
Other Data Transforms

- Count – This will open a dialog box in which you can count the number of occurrences of the same value (e.g., 1) for several specified variables per case. This count will be stored in a new variable column.
- Recode – This enables the user to change a value for all cases. The old and new values are entered in the dialog box, click OK, and the new data values are displayed.

Other Data Transforms

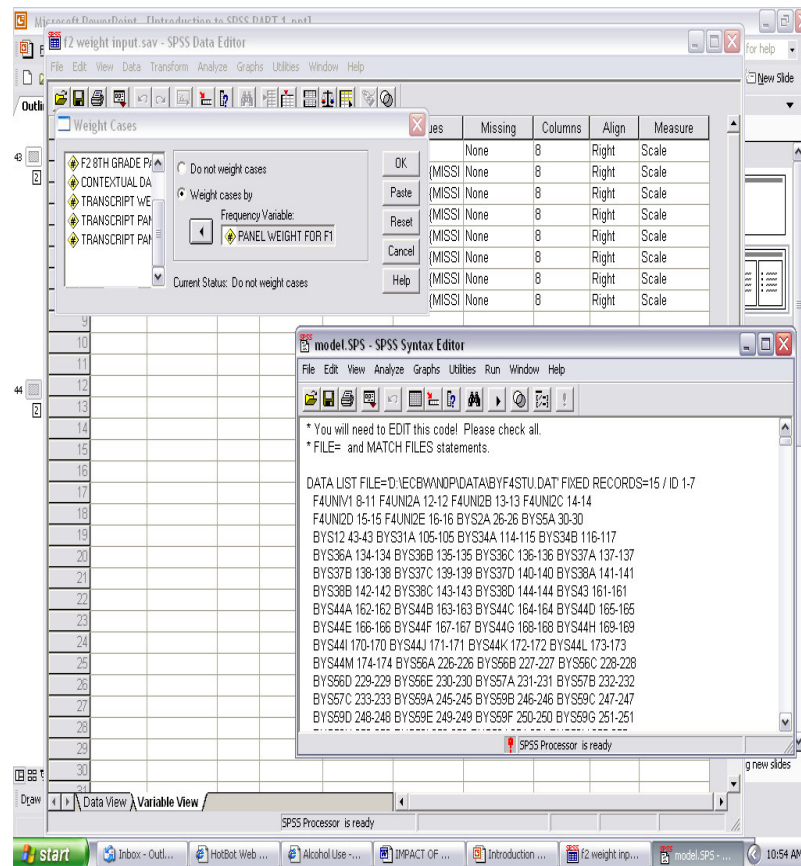
- Rank Cases – For a given variable, case values can be ranked or be classified into groups based upon their percentile values. The results are displayed in a new column.
- Replace Missing Values – In computations where missing data can be problematic, this command/dialog box enables the user to replace missing data with the mean, median, mean of nearby points, linear interpolation estimates, etc. for a given cell for a given variable.

Weighting Data



- If you have a non-random sample, you may need to weight the data, adjusting it to the reference population.
- Click on Data – Weight Cases, and select the appropriate weight variable (you probably will have to construct this).

Save Your Syntax!



- For most applications, you have the option of clicking “OK” to apply an action or the option of pasting the command into a syntax file, where you save your commands for future use.
- A syntax file is very useful for checking errors and for archiving your analyses, in case you need to replicate an analysis.

STUDENT EXERCISES

Assignment 1 – Data Entry and Variable Specifications (Session One)

Given the data provided below, enter the three columns of variable data for the twenty cases on an SPSS spreadsheet. Don't forget to save your data! Then, create a new variable four, give it a name, and use the Transform Compute commands to target this variable = the difference of variables two and three (Posttest - Pretest scores). Then use the Data Sort Cases commands to sort the cases based upon variable one (Stipend) in ascending order.

<u>Case</u>	<u>Stipend</u>	<u>Pretest Score</u>	<u>Posttest Score</u>
1	\$50	45	69
2	\$15	56	65
3	\$15	84	80
4	\$50	61	74
5	\$50	72	79
6	\$15	80	92
7	\$50	55	91
8	\$15	96	99
9	\$15	34	51
10	\$15	72	74
11	\$50	58	82
12	\$50	61	79
13	\$15	42	41
14	\$50	75	83
15	\$50	94	90
16	\$15	80	73
17	\$15	73	71
18	\$50	46	71
19	\$15	86	91
20	\$50	69	98

Verify your results with a calculator.

STUDENT EXERCISES

Assignment 2 – Data Entry and Modifications (Session One)

Open SPSS on the provided PC. Open an Excel data file provided by the instructor on the computer's "C" drive under an Excel program folder. The instructor will provide instructions as to the title of the data file. Choose File, Open, then Data, and a dialog box will appear. Scroll down the "Look in" box to find the Excel file as directed. Within this dialog box, you can click in the open box beside "File name" and type the file name. Additionally, scroll down beside "Files of type..." until you find an option called "Excel (*.xls)". Then click "Open," and a dialog box will appear, where you should check "read variable names from the first row of data." Then click OK.

Once the data appears, check the names of variables, and assign names if necessary. Delete the second variable by highlighting the top of the variable column, right double clicking with the mouse, then choosing the delete function. If you change your mind immediately, select Edit, Undo delete, but only if you have not made any other changes to the datasheet. Similarly delete the second and eleventh cases by highlighting on each, right double clicking with the mouse, then choosing the delete function. Again, you have the option of undoing the delete if you do so immediately.

Practice inserting variables and cases. For variables, highlight a variable, then click on Data, Insert Variable. The highlighted variable and all variables to the right will shift one column to the right. An empty column will appear – enter data and go to Variable View to enter a variable name, variable label, data types, etc. If you change your mind immediately, click Edit, Undo Insert Variable. If you change your mind later, highlight the variable and hit the delete button on your keyboard. To insert a case, highlight an existing case, then click on Data, Insert Case. The highlighted case and all cases below it will be shifted down the spreadsheet by one case number, and an empty case row will appear. Fill in the row with data. Undoing or deleting the new case is performed in the same fashion as for the variables.

STUDENT EXERCISES

Assignment 3 – Descriptive Statistics (Session Two)

Using the SPSS datasheet data set provided to you by your instructor, select four variables. For each variable, use the Analyze, Descriptive Statistics, Frequencies commands to calculate the mean, median, mode, range, and standard deviation. Also, for each variable, click on the Charts option in the Frequencies dialog box and specify either a histogram, pie chart, etc. to appear in the output with your data. Which type of chart is most appropriate for the variable?

Save your data, print the output, and write a short report describing your results and what they mean.

STUDENT EXERCISES

Assignment 4 – Correlation Analysis (Session Two)

- A. Using the SPSS datasheet data set provided to you by your instructor, select two variables that you would predict to be closely related – that is, if one variable increases, the second variable increases as well, and vice-versa. You will be testing a null hypothesis that there is no relationship between the two variables – zero correlation. Use the Analyze, Correlate, Bivariate commands to open the correlation dialog box – specify Pearson's r and two-tailed test of significance. Once everything is specified, click OK. Save and print your data output.
- B. As an extra exercise, construct a scatterplot of the two variables, with one variable being expressed on the Y-axis and the second variable being expressed on the X-axis. Go to Graphs, Scatter..., choose simple scatterplot, then Define. A dialog box will appear where you can specify Y and X variables, a title option if you choose, etc. Click OK and the plot will be constructed. Save and print your scatterplot output.
- C. Repeat steps A and B for two variables that you do not expect to be correlated.
- D. Write a summary report of the two correlation tests. Was either correlation coefficient significant at $\alpha = .05$? Relate the correlation coefficient to the corresponding scatterplot. How does the graphed pattern of data occur for each correlation value? Furthermore, does correlation imply causation? Does variable X "cause" variable Y if there is a significant correlation between them?

STUDENT EXERCISES

Assignment 5 – t test for paired samples (Session Two)

Using the SPSS datasheet data set provided to you by your instructor, select two variables that measure a similar trait, such as pretest and posttest scores for individuals involved in an intervention treatment program. Go to Analyze, Compare Means, Paired Samples t-test. A dialog box will appear, where you can specify the two variables, desired statistical output, etc. Click OK to start the calculation. An output window will appear. Save and print this data.

The null hypothesis in this calculation is that the two variable means will not be significantly different at an alpha level of 0.05, the probability of making a Type I error. What result did you obtain? Do we retain or reject the null hypothesis for these two variables?

Write a summary report of your data, discussion, and conclusions.

STUDENT EXERCISES

Assignment 6 – t test for independent samples (Session Two)

Using the SPSS datasheet data set provided to you by your instructor, select two variables, one for which the data values are continuous, and the second variable for which the data are dichotomous (e.g., female-male; high self-esteem—low self-esteem). Go to Analyze, click Compare Means, then click Independent Samples t-test. A dialog box will appear. Within the dialog box, indicate the test variable (continuous values such as test scores). Then indicate the grouping variable (dichotomous) and click Define Groups – you will have to enter the data value labels for Group 1 and Group 2, for instance Group 1 = data value 1 for female and Group 2 = data value 2 for male. Click Continue to close the Define Groups dialog box and return to the Compare Means dialog box, where you will click OK to start the computation.

An output window will appear. Save and print this data.

The null hypothesis in this calculation is that the two test variable means between the two grouping variables will not be significantly different at an alpha level of 0.05, the probability of making a Type I error.

What result did you obtain? Do we retain or reject the null hypothesis for these two test variable means?

Write a summary report of your data, discussion, and conclusions.

INTRODUCTION TO GRANT WRITING

Purpose: The purpose of this session is to introduce participants to grant writing and to review the components of a grant proposal.

Learning Objectives:

1. Participants will be able to describe the concepts of GFA, RFA, and RFP
2. Participants will be able to describe the general elements of a grant proposal.
3. Participants will demonstrate an understanding of how to follow an application=s guidelines.
4. Participants will be able to describe how they can locate additional assistance for grant preparation.
5. Participants will be able to describe at least two ways to identify grant funding opportunities.

Key Points:

- A strong application will have a creative, exciting subject, a well-defined and well-developed project plan, and a clear, concise presentation.
- It is imperative that the applicant read and follow all application instructions and guidelines carefully.
- Not all grant applications ask for the same components or have the same instructions and guidelines.
- Sufficient time should be allowed to write the grant, and the first step generally is to create a time line for completing the application.
- Everything in the grant application should be justified; don=t assume that a reviewer will intuit missing details.
- The goals and objectives of the proposal and the design of the project must be reasonable and not overly ambitious. The application must be realistic.

Session Outline:

1. Introduce the concept of grant writing.
2. Show Slide One: Discuss some of the terminology associated with grant writing.
3. Show Slide Two: Discuss the characteristics of strong proposals.
4. Show Slide Three: Discuss the different components of a grant application.
5. Review the Handout A Rules for Successful Grant Writing.

Session Notes:

1. The faculty can introduce the session by explaining that grant writing is a very complex task. This session will only provide a very basic introduction to grant writing and participants will likely need additional information and practice prior to preparing their first proposal.
2. The faculty can show slide one and discuss some of the terms that the participants may hear or read when they are researching information about grant applications. Ask participants if there are any other terms that they have come across related to grant writing that they are unfamiliar with. If faculty is also unfamiliar, have the participants research the terms on the internet or through their university's research and sponsored programs office either during the session or as an outside assignment. The following information can be discussed:
 - a) The terms RFA, GFA, and RFP are used interchangeably by most researchers who rely on grant funding.
 - b) Grant announcements frequently include the following: program objectives and priorities; type of assistance; eligibility requirements; application deadlines and where the application and forms are to be submitted upon completion; application format; recipient financial participation requirements; evaluation criteria that will be used to assess the applications; contact points for further information; and a statement regarding the amount of funds available for the program.

- c) The PI or Principal Investigator is the person responsible for directing the study or research, and is accountable to the funding source for the proper conduct of the study. This person may or may not also be the Project Director. The Director usually heads up and coordinates the research team and is responsible for day-to-day program operations. This position (Director) may also be called the Program Manager. Some applicants use Co-PIs or Co-Principle Investigators. These individuals generally are other faculty from an institution or professionals from other institutions who are collaborating on the proposal and the research involved.
3. Next, the faculty will review the characteristics of a strong grant application. The faculty will also briefly discuss the concepts of the research question and the hypotheses.
- a) Strong application: thorough review of previous research in the field; a creative, innovative idea that answers needs in the field and/or leads to a greater understanding of the area being studied; a well-developed and well-defined project plan; presented in a clear, concise manner consistent with application guidelines
 - b) Research question: this is a statement of the topic to be studied. A strong research idea should answer the questions AWhat is the benefit of answering this research question? Who will it help and how?@ An extensive review of the field and its literature will yield gaps to be filled or areas needing further exploration.
 - c) Hypotheses: A well-focused and research question leads directly to the hypotheses. Hypotheses are specific predictions about the topic you are examining. Strong hypotheses have a solid rationale and are measurable and testable within the proposed project. Good research is driven by the proposed hypotheses.
 - d) Many, many proposals are not funded the first time. Good applications are often those that have been revised after being critiqued but not funded. When a proposal is rejected, it is important to read the review very carefully and to read the comments with an open mind. It is important to determine if the reviewers appeared favorable to the overall purpose of the proposal and to look at any suggestions for change. A decision will then need to be made: to rewrite and resubmit or forget this particular research idea.

4. Faculty will then review each of the following components of a grant application. Remind participants that these are components frequently seen in grant application kits; however, not all components will be in all grant RFAs, GFAs, or RFPs. (It may be helpful to obtain a grant announcement to review with the participants. It may also be helpful to obtain a copy of a completed grant proposal. The announcement and guidelines for that particular application can also be provided to the participants who can be asked to provide a critique of the proposal as an out of seminar assignment.)
- a) *Abstract:* An abstract is the summary of the project and should be written after the proposal is completed (or revised after the proposal is completed). The abstract should be brief and succinct, and should state the hypotheses, objectives, why the objectives are important and innovative, and plans and methods for accomplishing your goals.
 - b) *Goals / Specific Aims or Objectives:* A goal is a broad statement which describes a desired outcome. Goals are long-range and very general. Objectives are measurable results or targeted outcomes to be reached on the way to the goal. Objectives need to be specific, concrete, and obtainable within a specified time frame. As described by the Foundation Center (see resource section), there are four types of objectives: behavioral where a human action is anticipated; performance where a behavior will occur within a specific time period; process where the manner of how something occurs is the anticipated outcome; and product where something tangible results.
 - c) *Background and Problem Statement:* The background section should answer questions such as What is the scope of the problem? What is the current relevant literature? What is your evaluation of the existing knowledge gaps in the field? What is the problem to be addressed? What is the theoretical basis of the study? What are the long-term benefits and contributions to the field? A literature review will be necessary to gather information. This shows reviewers that there is an understanding of the field and the knowledge to perform the tasks proposed.
 - d) *Design and Methods:* This section describes the methodology chosen and why it was chosen. It will include information such as a description of the sampling methods, the research protocol (how the data will be collected, what procedures will be used), instruments being used, a timeline of tasks to be completed, data analysis and project evaluation methods. It will also include a discussion of the limitations of the study and alternative methodologies to be used if needed.

- e) *Evaluation:* The proposed research project needs to be evaluated from the beginning of the program B not just at the end of the funding cycle. Evaluation activities should be built into the grant proposal and should address the progress that the organization is making toward reaching the project=s goals and objectives. In many ways, the evaluation plan can be used as a management plan for the entire research project.
- f) *Resources and Organizational Capacity:* This section describes the resources you have available for completing the project. This would include equipment such as computers and printers, lab equipment, copiers and any other relevant equipment that will be used to carry out the research. Also included here are resources such as office space and support personnel. If your collaborators are allowing use of their resources, be sure to list these as well. This section also includes a description of the types of research that the organization has undertaken in the past and is conducting currently. It is important to let the reviewers know that the organization is capable of conducting the type of research described in the proposal. This is also the section where the backgrounds of the personnel proposed in the application can be discussed, with a particular emphasis on the skills that each person brings to this proposal. (Many grant announcements ask for Biographical Sketches of the key personnel in the proposal. These are attached in the appendices; however, it is important to relay some of the key skills and experiences of the personnel in the actual grant text as well.)
- g) *Budget:* Reviewers evaluate a requested budget for whether it is realistic and justified by the aims and methods of the project. Clearly delineate costs to be met by the proposed funder and all other funding sources; outline both administrative and program costs. Include personnel costs for salary and benefits, travel, incentives, equipment and any other necessary expenses. List indirect costs where appropriate.
- h) *Human Subjects:* The U.S. Department of Health and Human Services regulates the treatment of human subjects through a set of internationally recognized ethical principles. These principles are designed to safeguard a research participants rights and welfare. If you are using human subjects in your study, you will need to write a section in your proposal demonstrating your willingness to abide by these regulations as you conduct your research. Areas covered include confidentiality, informed consent, hazards/benefits of participation, recruitment, and subject population.

- i) *Appendices*: Information placed in appendices should be completely supplemental. Information for an appendix might include data collection instruments and publications or manuscripts related to the project. Resumes, bio-sketches, and letters of support are often part of the appendices. No reviewer is obligated to review anything in an appendix so be certain not to put essential information here. Many grant announcements and guidelines restrict what is allowed in the appendices of an application. It is possible for an application to be classified as ineligible for review if the applicant tries to include additional materials in the appendices as a means of expanding the application.
- 5. Next the faculty will handout the *ARules for Successful Grant Applications*® and discuss each point. Remind participants that this list was developed by the Substance Abuse and Mental Health Services Administration (SAMHSA), but that the information provided could apply to most other funding sources.
- 6. Remind the participants that panelists and reviewers look for projects that are: innovative, well-documented, not too narrow, not rambling, well- focused, exciting, detailed, well-developed, realistic, currently relevant.
- 7. Faculty can then discuss some of the common problems that reviewers find in grant applications:
 - a) the proposed research is not significant to the field;
 - b) the project is too general or unfocused;
 - c) the proposal is based on a shaky hypothesis;
 - d) the proposed workload is unrealistic;
 - e) the research design is poor;
 - f) there is inadequate knowledge of the literature;
 - g) there is a lack of innovations;
 - h) the application did not follow the guidelines
- 8. Faculty then can discuss with the students some of the ways that they could seek assistance on developing grant applications and where they can seek additional information about grant writing or about grant funding sources. The reference list could be provided to the participants as a handout.

References for Grant Writing Module

National Institutes of Health Office of Extramural Research: Guide for Grants and Contracts can be found at:

<http://www.nih.gov/grants/guide/index.html>

The Research Assistant Grant Writing Tutorial can be found at:

<http://www.theresearchassistant.com/tutorial>

The Foundation Center: A Proposal Writing Short Course can be found at:

<http://fdncenter.org/onlib/shortcourse/prop1.html>

The Substance Abuse and Mental Health Services Administration: Grants Information can be found at:

<http://www.samhsa.gov/grants/grants.html>

The Wright State University Office of Research and Sponsored Programs: Proposal Preparation can be found at:

<http://www.wright.edu/rsp/>

SOME GRANT WRITING TERMS

GFA: Guidance for Applicants

RFA: Request for Applications

RFP: Request for Proposals

PI: Principle Investigator

CHARACTERISTICS OF STRONG APPLICATIONS

- creative and innovative
- leads to greater understanding of the problem or addresses a need in the field
- well-developed and well-defined
- clear and concise
- follows application guidelines

COMPONENTS OF GRANT APPLICATIONS

- Abstract
- Goals or Specific Objectives
- Background and Problem Statement
- Design and Methods
- Evaluation
- Resources and Organizational Capacity
- Budget and Justification
- Human Subjects
- Appendices

RULES FOR SUCCESSFUL GRANT APPLICATIONS

***Rule 1:* Match Ideas to the Funding Source and Thoroughly Understand What the Program Wants.**

The application must meet the program's needs. Do not submit an application for a project that does not fit the announcement. Read the program goals and all programmatic description to ensure that the proposed approach can fulfill the actual program requirements.

***Rule 2:* Use the Program Office for Technical Assistance and Advice.**

Very few applicants actually seek the assistance of program staff in developing their applications. The funding agency (SAMHSA) is committed to assuring the receipt of many good applications and thus wants to assist potential applicants as much as possible. Attend the technical assistance session if one is held.

***Rule 3:* Begin the Necessary Groundwork Before the Notice of Funding Availability Is Published.**

Although the official notice of availability of funding in the Federal Register may not be made until as much as six to seven months into the fiscal year, it is generally known what funds are available based on the Congressional action taken. Many professional organizations and national associations highlight Federal programs in newsletters to constituents well in advance of the official notice. Take advantage of additional lead time to develop ideas and begin the necessary groundwork before the program is officially announced. Develop a committee and get key participants in place who will assist with developing the application.

***Rule 4:* Establish a Timetable and Organize the Necessary Personnel as Soon as Funding Availability Is Announced.**

The production of a successful grant application usually cannot always be worked around everyone's routine schedule. Establish a plan for what needs to be accomplished, by whom, and when. Block out time on people's calendars in advance. The production of a grant application requires the same diligent planning and scheduling as does any other labor intensive, priority project. Identify the individuals who can complete certain necessary tasks.

Rule 5: Follow the Instructions and Format.

Even if you believe that your format for describing the proposal is better, don't use it. A format would not have been provided unless it was meant to be followed. The most compelling reason for following the format is that reviewers expect to see information presented in a consistent manner. Pay attention to every detail of the format and instructions, including directions on page limitation, type size and number of copies required for submission.

Rule 6: Lay out a Master Plan.

A good application should provide a master plan -- the vision of where the project is going and the expected results. Although this may be difficult because some ideas have not been fully developed, every effort should be made to think through reasonable approaches. The master plan should cover the key questions of who, what, where, when and why.

Rule 7: Be Reasonable and Realistic.

With respect to detail, successful applications find the safe middle ground between too much and too little. Succinctly describe, within the page limitations, the project and how it is to be carried out, but do not provide unnecessary detail. It may result in reviewers missing important information. If the proposal is unrealistically ambitious credibility comes into question. If there is no justification regarding how and why you think you will be able to accomplish an ambitious goal, do not include it. An unexplained, ambitious goal may negatively affect your score rather than impress reviewers.

Rule 8: Provide Information on All the Review Criteria.

This point cannot be emphasized enough. An application must provide information in support of all the review criteria. The reviewers will assess the merits of the application as related to the review criteria. Be sure to put information under the appropriate criterion. Carefully address the cultural competence components of the review criteria.

Rule 9: Explain Omissions, Rather than Hope No One Will Notice.

It is important to understand that what is not said in an application can hurt more than what is said. Very often an application loses points because the reviewers did not have an explanation

for an omission. For example, if a segment of the population is not included in the project, this absence should be explained.

Rule 10:* **Make a Reasonable Funding Request and Match the Budget to the Scope of Work.*

It is important that the budget request clearly relate to the narrative and the scope of work. The justification for the funds must match the amount requested. Be specific and justify each item for all years of support requested. Appropriately defend staff person hours. Specify the need for consultants and travel. Explain the use of consultants instead of internal staff.

Rule 11:* **Address Items Regarding Participant Protection/Human Subjects.*

Address all items as necessary. If any of the areas do not apply, state not applicable, and indicate why. Provide for parent consent as applicable. Provide details for debriefing children as well as parents/guardians. Address confidentiality of client/subject information within the project team (e.g., clinicians, evaluators, support staff).

Rule 12:* **Keep the Application Simple, Reasonable, Business-like and Professional.*

The application should be error free and all the forms completed correctly. Pay attention to detail. The application should look like it is ready for publication. Have someone check every page of every copy of the application to be sure that all pieces are included. READ and FOLLOW all directions outlined in the GFA.

* Excerpted from [Tips for SAMHSA Grant Applicants](http://www.samhsa.gov/grants/grants.html) which can be found online at:
<http://www.samhsa.gov/grants/grants.html>