

Coping With Technological Disasters: Appendices

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Appendix A

Conducting a Community Survey

Introduction

Before one can begin to produce actionable programs to help communities cope with the social and economic impacts related to technological disasters, data on how a community is affected should be collected. To accomplish this task, community leaders and mental health professionals can collect benchmark information through community surveys. This information can provide one basis to develop and implement a program for mitigating the chronic consequences of technological disasters.

What is Demographic Information?

Demographic information refers to specific characteristics about a group of people. In the case of your community, it is important to determine socioeconomic characteristics (gender, age, occupation, marital status, income, and number of dependents) to identify people variously affected by the disaster.

Designing a Survey for Your Community

Before designing any survey instrument, the identification of the research objectives must be finalized. The literature describing technological disasters indicate that community members have measurable mental health impacts, social impacts, and economic impacts following such events. These effects can be determined by administering standardized psychological tests (Impact of Events Scale; Center for Epidemiologic Studies Depression Scale; Frederick Reaction Scale; and Social Disruption measures). These tests may be easily evaluated and results interpreted for program use. Other social and psychological measures may be added if deemed necessary.

As a minimum surveys should include:

- Demographics
- Measure of Social Disruption
- The Impact of Events Scale (IES)
- Depression Scale
- Open ended questions – perceptions of how the event has affected individuals, families and communities

Table of Standardized Measures

Scale	Measure	Reference
Impact of Events (IES)	Intrusive Stress & Avoidance Behavior	Horowitz, 1979
CES Depression Scale	Severe Depression	Center of Epidemiologic Studies, 1972
Anomia	Social Malintergration	Srole, 1956
Frederick Reaction Index	Level of Stress in Groups	Frederick, 1988

Strategies for Collection of Information

Ideally, samples should be representative of the entire community. This will require that the procedures used to administer the survey insure that every member of the community has an equal chance of selection, at the time of the collection of data. When every resident of a community is surveyed, sampling is not a concern.

Survey instruments can be administered by:

- Mail Out (Self-Administered)
- Phoned Randomly (Researcher Administered)
- Conducted Face-to-Face (Researcher Administered)
- Positioned in Public Places (Self-Administered)

Mail, phone and personal surveys all present problems for selecting random individuals or households. For mail and face-to-face surveys one can use a random number table or computer assisted random-digit dialing techniques. More often than not, however, community mental health professionals will want to gather descriptive information to gain a basic understanding of the types of chronic social and psychological problems being experienced in the community.

When considering the type of survey to use, there are some logistical considerations to address. Mail surveys may be costly and reminders may be required to facilitate returns. However, they do not require the use of researchers on phones or door-to-door. Phone surveys are faster and less costly. They result in better return rates, but may be biased by the researcher's interpretation and coding of respondent's answers. Face-to-face surveys require the training and selection of individuals with good interpersonal skills and the ability to record precise information when presented by

the respondent. This is the most costly (manpower and time-wise) of any of the survey forms. Your community will need to evaluate resources and determine the most appropriate method for the distribution of your survey.

If your community is placing surveys in public places, you might consider:

- Hospitals
- Doctors/Dentists Offices
- Community Centers
- Stores
- Public Library
- Chamber of Commerce
- City Facilities
- Public Utility Facilities
- Schools
- Barber/Beauty Shop
- Inserts in Local Newspapers
- Other areas determine to be frequented by many community members

Surveys placed in public places cannot be considered random. However, by comparing demographic characteristics of the sample to demographic characteristics of the community, and estimate of the representativeness of the sample can be made.

The Survey Instrument: An Example

An actual survey is presented which can be modified to fit your community needs and administered to indicate chronic impacts of technological disasters.

Community Survey

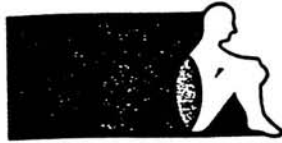
1. Place demographic section with questions first

- How many years have you lived in (city)?
- How many people live in your household?
- How many dependent children live in your household?
- What is your marital status?
 1. Married
 2. Divorced
 3. Single
 4. Widow/widower
 5. Other
- What is your ethnic group?
 1. White
 2. Alaska Native
 3. Other
- What is your gender?
 1. Male
 2. Female
- What is your current occupation?
- What was your occupation at the time of the (technological accident)?
- Years of Education:
 1. Some high school
 2. High school diploma
 3. Some college, no degree
 4. College degree
 5. College degree plus graduate studies
 6. Masters degree
 7. Professional degree
 8. Other _____
- What was your household income in (year) before taxes? (Determine ranges of incomes based upon the high and low income levels of your community.)

2. Place I.E.S. second:

Please read these statements made by people experiencing stressful life events. For each statement, please indicate by circling the appropriate number, how often it was true for you about the _____ (insert name of event) during the past seven (7) days. It might not have happened at all during the past week, or during the past week it might have occurred only rarely, sometimes, or often. Circle one response for each statement.

	Not at all	Rarely	Some- times	Often
_____ 1. I thought about it when I didn't want to. (The thought of the _____ just popped into my head).	1	2	3	4
_____ 2. I avoided letting myself get upset when I thought about it or was reminded of it.	1	2	3	4
_____ 3. I tried to remove it from my memory.	1	2	3	4
_____ 4. I had trouble falling asleep or staying asleep.	1	2	3	4
_____ 5. I had waves of strong feelings about it.	1	2	3	4
_____ 6. I had dreams about it.	1	2	3	4
_____ 7. I stayed away from reminders of it.	1	2	3	4
_____ 8. I felt as if it hadn't happened or wasn't real.	1	2	3	4
_____ 9. I tried not to talk about it.	1	2	3	4
_____ 10. Pictures about it popped into my mind.	1	2	3	4
_____ 11. Other things kept making me think about it.	1	2	3	4
_____ 12. I was aware that I still had a lot of feelings about it, but I didn't deal with them.	1	2	3	4
_____ 13. I tried not to think about it.	1	2	3	4
_____ 14. Any reminder brought back feelings about it.	1	2	3	4
_____ 15. My feelings about it were kind of numb.	1	2	3	4
_____ 16. I felt physically uncomfortable (heart racing, sweating, stomach upset) when I was reminded of the event.	1	2	3	4
_____ 17. I was unable to remember important aspects of the event.	1	2	3	4
_____ 18. I felt I couldn't respond to things emotionally the way I used to.	1	2	3	4
_____ 19. I was more jumpy than usual.	1	2	3	4
_____ 20. I was more frequently on guard to extra alert to possible danger.	1	2	3	4
_____ 21. I had more difficulty trusting others.	1	2	3	4



CLINICIAN EVALUATION GUIDE

INSTRUCTIONS

1. Instructions to you are printed in blue. Questions that you ask or statements that you make to the patient are printed in plain black type.
2. Within each module, proceed sequentially from question to question unless instructed either to skip to another question or to EXIT from the module. Remember: always proceed to the next question unless you are instructed to go elsewhere.
3. Diagnoses are boxed and shaded in red.
4. EXIT means to exit from the module you are in. Then proceed either to the next module that needs to be evaluated or to the Summary Sheet on the last page.

PATIENT NAME _____

INTRODUCTION TO PATIENT

Let me look at your answers to the questionnaire. I'll be asking you some questions to help me understand some of the symptoms that you checked off. I'll be making some notes as we go along.

ENTERING CLINICIAN EVALUATION GUIDE (CEG) MODULE

Enter modules triggered by the Patient Questionnaire (PQ) as follows:

At least three of
#1 to #16
Somatoform, p. 9

#17
Eating, p. 7

#18 or #19
Mood, p. 1

#20, #21, or #22
Anxiety, p. 3

At least one of
#23 to #26
Alcohol, p. 5

Any module not triggered by the Patient Questionnaire can be entered if you have other reasons to suspect a diagnosis in that module.

Enter modules in the order in which they appear in the Clinician Evaluation Guide (ie, Mood first, Anxiety second, Somatoform last).

PRIME-MD was developed by Robert L. Spitzer, MD, Janet B.W. Williams, DSW, Kurt Kroenke, MD, Mark Linzer, MD, Frank Verloin deGruy III, MD, Steven R. Hahn, MD, and David Brody, MD, and underwritten by a grant from Pfizer Inc.

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MOOD MODULE

MAJOR DEPRESSION

For the last 2 weeks, have you had any of the following problems nearly every day?

- | | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|----|
| 1. Trouble falling or staying asleep, or sleeping too much? | Yes | No |
| 2. Feeling tired or having little energy? | Yes | No |
| 3. Poor appetite or overeating? | Yes | No |
| 4. Little interest or pleasure in doing things? | Yes | No |
| 5. Feeling down, depressed, or hopeless? | Yes | No |
| 6. Feeling bad about yourself — or that you are a failure — or have let yourself or your family down? | Yes | No |
| 7. Trouble concentrating on things, such as reading the newspaper or watching television? | Yes | No |
| 8. Being so fidgety or restless that you were moving around a lot more than usual?
If No: What about the opposite — moving or speaking so slowly that other people could have noticed?
Count as Yes if Yes to either question, or if psychomotor agitation or retardation observed during interview. | Yes | No |
| 9. In the last 2 weeks, have you had thoughts that you would be better off dead or of hurting yourself in some way?
If Yes: Tell me about it. | Yes | No |
| 10. Are answers to five or more of #1 to #9 Yes? | Yes | No |

Major Depressive Disorder
Go to #12

PARTIAL REMISSION OR RECURRENCE OF MAJOR DEPRESSION

11. Have you ever had a time when you were either much more down or depressed, or had even less interest or pleasure in doing things?

If Yes: At that time, did you have many of the problems that I just asked you about, like trouble sleeping, concentrating, feeling tired, poor appetite, little interest in things?

Count as Yes only if, in the past, patient probably had five of symptoms #1 to #9 and acknowledges some current depressed mood or little interest or pleasure.

Yes Partial Remission or Recurrence of Major Depressive Disorder No

DYSTHYMIA

12. Over the last 2 years, have you often felt down or depressed, or had little interest or pleasure in doing things?
Count as Yes only if also Yes to: Was that on more than half the days over the last 2 years?

Yes No Go to 14

13. In the last 2 years, has that often made it hard for you to do your work, take care of things at home, or get along with other people?

Yes Dysthymia No

MINOR DEPRESSION

14. Was Major Depression (including partial remission or recurrence) diagnosed at #10 or #11?

Yes No

15. Are answers to two or more of #1 to #9 Yes?

Yes Minor Depressive Disorder No

BIPOLAR

16. Did a doctor ever say you were manic-depressive or give you lithium?
If Yes: When was that? Do you know why?

Yes Add R/O Bipolar Disorder No

DEPRESSION DUE TO PHYSICAL DISORDER, MEDICATION, OR OTHER DRUG

17. Are current depressed symptoms probably due to the biological effects of a physical disorder, medication, or other drug?

Yes Add R/O Depressive Disorder Due to Physical Disorder, Medication, or Other Drug No

Not Sure

4. *Place Reaction Index Fourth.*

The following statement lists activities which people sometimes use to help them deal with their feelings after experiencing a negative or traumatic event. Please answer the following questions based on the activities you have engaged in to cope with the event.

Since the event, I have:	Not at all	Rarely	Some- times	Often
_____ 1. talked with friends or relatives about my problems.	1	2	3	4
_____ 2. found myself often asking others for help.	1	2	3	4
_____ 3. done things to get the attention of others.	1	2	3	4
_____ 4. involved myself in recreation or pleasurable activities.	1	2	3	4
_____ 5. bought some new things for myself.	1	2	3	4
_____ 6. completed housework (cleaning, polishing, straightening)	1	2	3	4
_____ 7. expressed little emotion to others.	1	2	3	4
_____ 8. complained to friends and relatives about my problems.	1	2	3	4
_____ 9. tired to take what came without letting it bother me and without complaining.	1	2	3	4
_____ 10. expressed anger that others were not making adequate efforts to help me.	1	2	3	4
_____ 11. become more involved in life and taken on more responsibilities.	1	2	3	4
_____ 12. tried not to bother other people with how I felt.	1	2	3	4
_____ 13. masked my true feelings when with others.	1	2	3	4
_____ 14. felt angry but held it in.	1	2	3	4
_____ 15. told myself that some good for others could come out of my misfortune.	1	2	3	4
_____ 16. let others tell me how to get better.	1	2	3	4
_____ 17. decided that there was a purpose behind my adversity.	1	2	3	4
_____ 18. let other see how bad I feel	1	2	3	4
_____ 19. kept my feelings bottled up inside.	1	2	3	4
_____ 20. done something constructive.	1	2	3	4
_____ 21. depended on my family or friends more than usual.	1	2	3	4
_____ 22. told myself that my problems would pass.	1	2	3	4
_____ 23. tried to act as if I wasn't feeling bad.	1	2	3	4
_____ 24. sought information from professional experts.	1	2	3	4

5. *Place Reaction Index* Fifth.

In this next section we would like to ask you how you react to things at work. Complete each sentence with the first thing that comes to your mind. For example, if I were to ask you: "I get angry when...", you might respond by saying, "when I'm working and somebody bothers me."

When I have a problem, I... _____

When someone gets angry with me, I... _____

When I am not treated right, I... _____

Conducting Focus Group Interviews

As one approaches communities impacted by technological accidents, the question of how to assess social impacts arises. The initial process of collecting data can involve interaction between the interviewer and small groups of respondents, referred to as focus groups. Focus groups are basically group interviews, although not in the sense of an alternation between the researcher's questions and the research respondents' responses. Instead, the reliance is on interaction within the group, based on topics that are suggested by the researcher, who typically takes the role as moderator.

This particular method of collecting information lets the researcher access data and insights that are less accessible by other data collection methods. It allows one to select small representative samples of the population. These focus groups will give the researcher information that will be useful as one designs a survey instrument to conduct a community study.

The primary advantage focus groups offer is the opportunity to observe a large amount of interaction on a topic in a limited period of time. This will require that the moderator be experienced in focus group interviews. An observer who maintains too much control over the focus group will stifle the flow of information, while too little control will permit members of the focus group to ramble or dominate the group.

Data collected from the focus groups may later be used as part of a larger effort to "triangulate" different forms of data collection on the same topic. It is the focus groups' independent, self-contained nature which is the feature that allows them to contribute to the "triangulation." The following information is presented to aid in selecting and conducting focus groups:

- Select a mental health or other qualified professional from the local community, if possible, to conduct focus groups.
- Review the community characteristics and develop focus groups to represent each of the characteristics of the community (if one group within the community's population is omitted, then your sample will be biased).
- Keep the focus group manageable (6 to 10 individuals).
- Conduct the focus groups in a local setting (it is always better to place individuals in an environment they are comfortable in to induce interaction).
- Listen for indicators of:
 - What members of the focus group feel are important
 - Questions that remain unanswered by members of the focus group. These are topics for information distribution in the future.
 - The specific areas where participants agree and disagree

- How the members of the focus group attempt to resolve differences and build consensus. This may provide a starting point for mitigating chronic impacts.

The most important way that focus groups can contribute to a project is for the design of the survey instrument. The idea is to use a small number of exploratory focus groups in the very early stages of the research to guide later construction of the survey questions. This will provide researchers with the participants' perspective, allowing for an accurate understanding of questions and mitigation activities associated with the technological disaster.

Appendix B

Outreach Activity: Community Education Newspaper Series

Introduction

The newspaper series was developed to be presented in 9 weekly vignettes as public service announcements. Local newspapers normally provide space at little or no cost for such community education articles. However, some newspapers may require a fee to defer typesetting and printing cost. These vignettes build upon the each other by defining technological disasters, describing a well known technological disaster's social impacts, examining social, mental and physiological effects of stressors, and describing coping strategies.

The newspaper series is presented so that lay individuals will understand the terms and conditions presented in each article. The following are suggestions for their use:

- Contact all local newspaper editors and determine the availability of public service space. If space is not available, determine cost for running 9 articles of approximately 600 words each in consecutive news issues.
- Once the series is run in the newspaper, place bound copies in public areas. (Library, doctor's offices, community meeting places, town hall, schools, community service organizations, etc.).
- In all cases the articles should be followed by the phone number and organization to which questions may be addressed for further information.
- Your needs may require different types of educational materials in addition to the 9 presented here. Local mental health professionals should be consulted for information and advice in preparing those specific needs articles.
- Determine if the newspaper series is suitable for a community information computer web site. Many members of communities are currently connected to the internet "information highway" through their personal micro-computers.
- Advertise the series in advance, through local community groups and community leaders. Whether the series is used through the local newspapers or the computer internet, advertising will insure that the population is aware of this valuable information.

You will find the following newspaper articles in this appendix:

- "Technological Disasters: Why Are They Different?"
- "Understanding Anger"
- "Letting Go of Chronic Depression"
- "Chronic Stress and Alcohol Consumption"
- "Talking to Children in Stressful Situations"
- "The Mood-Food Connection: Understanding Stress"
- "Chronic Stress and Cancer: Is There a Link?"
- "Coping With Technological Disasters"

TECHNOLOGICAL DISASTERS: WHY ARE THEY DIFFERENT?

A hurricane and an oil spill. Both are devastating, causing disruption, pain and uncertainty in a community.

But they're not the same. One is an uncontrollable force of nature. The other is caused by humans. As a result, the way they affect people in the long run is drastically different.

The people living around Alaska's Prince William Sound know about man-made, or technological, disasters all too well. When the Exxon Valdez ran aground on March 24, 1989, the 11 million gallons of oil that gushed into the Sound did more than eliminate the fishing season. It brought entire communities to the brink. Residents of this once-peaceful paradise are still trying to recover.

The irony of 20th century life is that the technology man uses to tame nature is just as likely to harm him. And when technology goes horribly awry, as in the case of the Exxon Valdez oil spill, experts say the consequences are even more devastating than natural disasters

"A disaster is always traumatic but it's even worse when it's created by another human because it makes the whole world seem uncertain," said Dr. Kai Erikson, a Yale University professor who has studied these calamities for more than 20 years.

The bottom line is that natural disasters bring people together and man-made disasters tear them apart. After a natural disaster, people band together in displays of "heartwarming helpfulness," said Dr. Bill Freudenberg, a professor of rural sociology and environmental studies at the University of Wisconsin.

"You see people helping each other until their hands bleed, and they feel good about that," he said. "You don't see that after a technological disaster."

For example, after Hurricane Opal ripped through northwest Florida in October 1995, personnel from the American Red Cross and the Federal Emergency Management Agency (FEMA) rushed in to provide supplies, repairs and moral support.

"The authorities and the media all lent a comforting re-establishment of normalcy after a terrifying event," Freudenberg said. "Eventually, life will be pretty much the same as it was before."

Not so after man-made disasters, which often require "experts" for cleanup or "techno-fixes."

"There's no FEMA equivalent for a technological disaster," Freudenberg said. "Exxon was all Prince William Sound communities had, and Exxon was the one that caused the problem. They were in charge of the cleanup. That's like putting Hurricane Opal in charge of cleaning up Florida. There's something funny about that."

Naturally, the goal of any company responsible for a technological disaster is to protect itself. "After a technological disaster, the people likely to come in are lawyers, and their goal is not to help you," Freudenberg said. "So where forces work together to restore normalcy after a natural disaster, they work to subvert normalcy after a technological disaster."

In the case of the Valdez spill, lawsuits against Exxon and the cleanup continued the disruption long after the day the oil tanker ran aground. This only intensified the mistrust and anxiety people already felt.

"Your rational self says the spill was a one in 10,000 chance," said Yale's Dr. Erikson. "But it did happen and you wonder when it will happen again. Fishermen know nature is fickle, but now the whole world seems more precarious."

Adding to people's distress is a sense that outsiders don't understand, especially if the environment doesn't look different. That was the case with the Three Mile Island nuclear accident, which released invisible radioactive gas.

"Natural disasters arouse human empathy, but we (outsiders) don't always believe technological disasters happen," said Dr. Mike Edelstein, professor of environmental psychology at Ramapo College of New York. "We think these people are somehow responsible for their own misfortune and we tell 'glow in the dark' jokes. That stigmatizes people."

Another difference is what technological and natural disasters destroy, and how rapidly. For example, when Mount St. Helens threatened Washington in 1980, the public had about two hours' notice and then the volcanic eruption itself was over quickly.

"In a technological disaster, the destruction goes on interminably," said Dr. Steve Kroll-Smith, a sociologist at the University of New Orleans.

That's because these accidents destroy things that can't be re-paired, such as the air, water and soil. In comparison, hurricanes and tornadoes destroy buildings and public utilities - things that can be rebuilt relatively easily.

"After a hurricane you rebuild your house and go on with life, but you can't rebuild air or water," he said. "Recovering from that is long, and indeed may not be possible."

In short, "it's more than 'Apocalypse Now,' " Kroll-Smith said. "It's 'Apocalypse From Now On.'"

But in Alaska's case, the hearty people have one factor in their favor: traditions of self-reliance and mutual helpfulness that will help them recover.

"It's a strong culture to build on," Freudenberg said, and "community education is a good way to start."

Remember...

Natural disasters are caused by uncontrollable forces in nature.

Technological disasters are human caused.

Natural disasters bring people together to rebuild and help each other.

Technological disasters produce mistrust and anxiety in people unable to repair the air, soil or water affected by such disasters.

Natural disasters allow people to rebuild and return to their predisaster lives.

Technological disasters do not allow people to return to predisaster conditions, instead communities must form new patterns for their lives.

UNDERSTANDING ANGER

In 1994, a jury in Anchorage ordered Exxon to pay \$5 billion in damages for the 1989 oil spill in Alaska's Prince William Sound.

It was the largest punitive damage award in American history. But it wasn't a fatal blow to the oil company.

"The law suits are finished and there may be others, but tankers are still steaming through the Sound," said Dr. Mike Edelstein, an environmental psychologist at Ramapo College of New Jersey. "It's almost like these companies get off easy."

No wonder victims of man-made calamities - whose lives have been disrupted indefinitely- remain angry for a long time.

"Part of the reason people are still mad is the way technological disasters are handled," said Dr. Kati Arata, a clinical psychologist at the University of South Alabama. "A company doesn't say, 'Gee, we screwed up. How can we help?' You have to sue for compensation, and the law suits drag out the pain."

In addition, a man-made disaster forever forces people to look at the world in a different way.

"They're continually reminded of the problem," Edelstein said. "It's like looking out your window every day and seeing a landfill in your backyard. You're always reminded."

Psychologists and sociologists emphasize that anger is a normal and healthy reaction that helps ease the pain and stress of a trauma.

"People come out of these situations feeling weaker and smaller than before," said Dr. Kai Erikson, a Yale University sociologist who has studied man-made disasters for more than 20 years. "The angry ones at least are working on some sort of energy."

"Through greed, carelessness or incompetence, someone has harmed you," Edelstein agreed. "The disaster in no way needed to happen. Someone could have stopped it."

But no matter how justified the anger is, allowing it to become all-consuming is unhealthy. How victims deal with this seething emotion will be key to their long-term recovery.

"If it's keeping you from moving on, what good is it doing you?" Dr. Arata asked.

Experts say it's important not only to understand why you're angry, but also to manage it. Otherwise, it only causes more pain and perpetuates the "corrosive community" that tears people apart after man-made disasters.

For example, the stress and anger may provoke families to snap, scream and swear at each other. They end up treating loved ones worse than they would treat total strangers.

"They deflect the anger, like 'I'm mad at my wife so I kick the dog,'" explained Dr. Steve Kroll-Smith, a sociologist at the University of New Orleans. "Don't forget who you're mad at and don't take it out on the wrong people."

How can you deal with anger? Experts offer this advice.

1.) Know that your feelings are valid. "Being angry at the company that caused the disaster is exactly how you ought to feel," Erikson said.

2.) Acknowledge you have no control over the people or companies that caused the accident. "The one thing you do have control over is your emotions," Kroll-Smith said. "You can control how you react and express your anger."

3.) Understand that anger harms only you. "It increases your blood pressure and wastes time and energy you could devote to your family and to enjoying life," Dr. Arata said.

4.) Instead of brooding, talk about your feelings, especially with people who share your situation. Trying to swallow your anger will make you feel isolated and depressed.

"Find others who share your circumstances," Edelstein said. "Outsiders don't understand, but insiders understand very well and you need them."

However, be careful when you discuss your anger. Insulting and demeaning others only hurts relationships.

"Words hurt and words can't be taken back," Kroll-Smith said. "Never forget that."

5.) Get physically active. Burn off energy by doing something productive. Mow the grass. Run. Wash windows. Hit a punching bag - anything but "sitting there and just being mad," Erikson said.

6.) Concentrate on solutions, not blame. Take positive action to ensure such disasters don't happen again.

For example, forming local grass roots organizations can be "very therapeutic," Edelstein said. "You won't just be feeling helpless and incompetent. That sense of empowerment is important."

Dr. Arata compared the benefits to the good feelings rape victims get when they help other victims. "It helps them give meaning to what happened," she said.

7.) And finally, Erikson said, "remember you are not alone. Others in the community share your pain, seek them out and help if you can."

Remember...

Anger is a normal response and healthy reaction that helps ease the pain and stress of a trauma.

Allowing anger to be all-consuming is unhealthy.

Prolonged anger does nothing for an individual's long-term recovery.

Deal with anger by directing it only at those responsible, understand that only you have control over your emotions, understand that anger harms only you, talk about your feelings, get physically active, redirect your anger and concentrate on solutions not blame.

Let go of your anger by acknowledging you have no control over those who caused the disaster.

Others are sharing the pain and emotions of the disaster; seek them out, and together you may find strength that you can't find alone.

LETTING GO OF CHRONIC DEPRESSION

Sadness. Insomnia. Guilt. Low self-esteem. Listlessness.

These are symptoms of depression, a common reaction in people who have lived through the loss and uncertainty of a technological disaster.

Sociologists and psychologists say depression is understandable, but letting go of it is essential to recovering from the calamity.

The good news is that depression is one of the most curable emotional problems: More than 80 percent of cases can be successfully treated, according to the National Alliance for the Mentally Ill.

"You are not alone," said Dr. Steve Kroll-Smith, a sociologist at the University of New Orleans. "What you feel is valid - in fact, validated by the thousands of people who have been through these disasters."

What are the signs of depression?

Symptoms include persistent sadness, loss of interest in usual activities, poor appetite or weight loss, sleeplessness or too much sleep, fatigue, feelings of worthlessness or excessive guilt, difficulty concentrating, and thoughts about suicide or death.

Depression can be triggered by stress, grief, helplessness, frustration and isolation - all of which describe how people feel after a technological disaster devastates their community.

"Often depression starts out as anger," said Dr. Jay Mulkerne, a clinical psychologist in Mobile, Ala.

"Victims of a technological disaster feel angry it happened and hopeless the situation will get better. Anger is not welcomed in our culture, so they bottle it up and turn it inward. Over time, it turns into depression."

Men are especially vulnerable to depression after a man-made disaster, according to Dr. Kati Arata, a clinical psychologist at the University of South Alabama.

"If you're the caretaker for the family and something prevents you from fulfilling that role, then you will get angry and depressed," she said.

Even worse, many men are taught to hide their feelings, which only deepens their depression. A survey of fishermen affected by the 1989 Exxon Valdez oil spill showed that 37 percent still reported depression six years after the accident.

"That's the problem with technological disasters," Dr. Arata said. "They just keep going. The fish and wildlife may be coming back, but years of bad fishing still affects their thinking."

So how can the depression cycle be broken?

Severe cases require professional help, involving therapy or medication. But you can start helping yourself.

Experts say the first step is to understand why you're upset, and to change the way you think if there's nothing you can do about it.

"People think, 'It's not fair the Valdez ran aground and the oil killed our fish,'" Mulkerne said. "Of course it's not fair, but fair has nothing to do with it. Life isn't fair. Everyone agrees it shouldn't have happened, but that doesn't help us deal with it. Life throws us curve balls and we have to learn to hit them."

Instead, accept that the disaster happened, and focus on what you can do for yourself and others now.

"If you wait around for the bad guys to be punished, it postpones getting one with life," Mulkerne said. "Law suits can drag on for years and they don't solve everything."

Focusing on something besides the disaster and the woe it's caused is one of the most beneficial things you can do.

"You're not a victim if you're being a helper," said Dr. Bill Freudenberg, a professor of rural sociology and environmental studies at the University of Wisconsin. "As mad or depressed as you are, take three of four small steps to help somebody else. Shovel their snow. Cut firewood. Buy someone a cup of coffee and talk."

By helping others, "you step out of the role of victim," Freudenberg said.

"The 20 minutes you spend on someone else is at least 19 minutes you're not thinking 'Poor me,'" he explained. "It's like a barking, frenzied puppy. You can tell the dog to stop barking, but it's better to distract the puppy by saying 'Sit!'"

Another positive benefit is that by getting involved with others, victims of man-made disasters realize they are not alone. In fact, getting together and talking may be one of the simplest and best things they can do for themselves.

"There's a lot of evidence in self-help groups that people who get together regularly and talk about their problems have a better time getting over them," Kroll-Smith said.

Victims also can combat depression with a series of small, personal steps. For example, keep a journal where you can vent your emotions. Avoid alcohol (a depressant) and caffeine (which can disrupt sleep). Establish a regular routine of sleeping, eating and exercising.

"Exercise is a great stress management technique," Dr. Arata said. "It releases endorphins, which are 'feel-good' chemicals."

Dr. Arata also recommended developing new hobbies, especially ones that involve family and friends, such as card parties or supper clubs.

"Isolation only increases depression," she explained. "Alaskan fishermen are naturally private people but fishing brought them together. When that was gone, so was their social contact."

And finally, "monitor negative thinking," Dr. Arata said. "Focus on solutions, not problems. You can make yourself feel better."

Remember...

People impacted by technological disasters become angry and that anger sometimes turns to depression.

**Signs of depression are persistent sadness, loss of interest in usual activities, poor appetite, weight loss, sleeplessness or excessive sleep, fatigue, low self-esteem, guilt, difficulty concentrating, and thoughts of suicide or death.*

**To release depression, start by accepting that a disaster has occurred and concentrate on helping yourself and others.*

**Don't dwell on retribution, become a helper for others, even if it's only to listen.*

**Establishing a new routine – proper sleeping, eating, and exercising will help reduce depression.*

**When people stop associating with each other, the isolation increased depression.*

**Talk to others, and work together on solutions, not problems.*

CHRONIC STRESS AND ALCOHOL CONSUMPTION

Since the 1989 Valdez oil spill in Alaska's Prince William Sound, people have felt tense, frustrated, sad and angry.

Many in the affected communities may have started drinking more. What they do not realize is that their emotions and habits are closely linked, and both are by-products of the technological disaster that negatively impacted their lives.

"There is a connection between stress and consumption of alcohol and food," said Dr. Kai Erikson, a Yale University sociologist who has studied many man-made disasters. "But people may not make the connection of why they're doing it. Understanding is the first step to taking care of it."

Vulnerable people are easy prey for drinking problems. And perhaps nobody feels more vulnerable than the victims of man-made calamities, whose lives get thrown into chaos indefinitely.

"We all have questions like 'Where did we come from? What's the meaning of life?'" said Dr. Bill Freudenburg, a sociologist from the University of Wisconsin.

"We try to make sense of the world around us. It's how we figured out how not to get eaten by the saber-toothed tiger. But some things don't make sense."

And something that doesn't make sense – like a technological disaster that could have been prevented – makes people anxious.

"Stress is real and we all have ways of dealing with it, including some that aren't necessarily good for us," Freudenburg said.

Besides the obvious health risks, the trouble with drinking too much is that it neither changes nor helps the root problem.

"When you start an obsessive behavior that wasn't there before, then it's a way for you not to acknowledge the pain and anger," said Dr. Steve Kroll-Smith, a sociologist at the University of New Orleans. "You're not confronting what happened, and that can get you in a lot of trouble."

Alcohol is particularly seductive because it's a "shortcut to sedation – a form of self-medication," said Dr. Jay Mulkerne, a clinical psychologist in Mobile, Ala. "It becomes a habit; you associate stress with a desire to drink."

It doesn't help that liquor is legal, always available and aggressively advertised.

"The whole marketing concept makes it look like life is great if you drink," Mulkerne said. "If you drink this, you'll feel more attractive. You'll have a great time.' The ads never show the down side – the drunk driving accidents and the lonely people with a bottle in their hands."

Studies show that, in particular, being married, single, unemployed and/or angry is correlated with abusive drinking patterns.

"Research indicates that many commercial fishers in Prince William Sound have experienced high stress levels over the last six years," said Dr. Steve Picou, a University of South Alabama sociologist, who has studied the community impacts of the Valdez oil spill.

That means stressed-out, outraged Alaskan fishermen have been at risk since the oil spill disrupted the fishing and undermined their jobs.

The cycle appears more vicious when this factor is tossed into the mix: Researchers have found that men without partners drink the most.

That means the more stress a person is under, the more vulnerable he is to alcohol. The more he drinks, the more likely his relationship is to crumble – and then he’s more likely to keep drinking.

So how can this cycle be broken?

First, stop denying or rationalizing your drinking. “Often, a DUI arrest is the first time people realize they have a problem,” Mulkerne said.

Second, “learn your cues,” Mulkerne said. Note the times or emotions that make you want a drink. For example, many people crave alcohol at social events, while others want it when they feel tense, angry, frustrated or sad.

“They want distraction,” Mulkerne said. “When they don’t want to think about something, they drink. It’s a form of escape. If you don’t like your life, you may alter your reality with alcohol instead of making real changes.”

And third, don’t be afraid to seek professional help.

“Drinkers can find support and strength in people who share their troubles,” Mulkerne concluded.

Remember...

Stress and alcohol become a vicious cycle when the desire to drink is associated with stress.

The use of alcohol clouds an individual’s ability to seek solutions to stressful situations.

Men without partners are more likely to consume alcohol under stress.

Breaking the cycle: realize you have a problem, learn what situations cause you to desire alcohol, ask for professional help.

TALKING TO CHILDREN IN STRESSFUL SITUATIONS

If adults are fearful and anxious after a technological disaster, just imagine how kids feel.

They already know the world can be scary, but it seems all the more precarious after a technological accident that may have contaminated the water they drink and the air they breathe.

"These are adult events that kids aren't ready to deal with," said Dr. Mike Edelstein, a professor of environmental psychology at Ramapo College of New Jersey. "Adults aren't, either. So how can you ask a child to deal with something you're not prepared for yourself?"

When talking to children, parents wonder if they should be brutally honest and risk magnifying their fears, or if they should say everything is fine, knowing that it's not.

"There's a fine line between honesty and scaring a child," said Dr. Steve Kroll-Smith, a sociologist at the University of New Orleans.

Honesty usually is the best policy because children will hear about the disaster at school, friends' home and on television.

"There's nothing worse than telling kids everything's fine when you know it's not," said Dr. Kai Erikson, a Yale University sociologist who has studied technological disasters for more than 20 years.

"Kids will think you're lying to them, or they'll think you're right and there's no explanation for how they're feeling. They'll think, 'There must be something wrong with me.'"

However, parents must choose their words carefully when discussing the situation. They should use simple language and avoid exaggeration, now matter how anxious they feel.

"The more blunt you are about the malevolent forces unleashed into the environment, the more you play into children's fears," Edelstein said. "That makes it more difficult for them to feel secure."

Children's fears are amplified when the fall-out hits the emotional home-front. For example, the stress may cause their parents to argue, and if the disaster affects the family's livelihood (as was the case with Alaskan fishing communities after the 1989 Exxon Valdez oil spill), their entire way of life may change overnight.

"Kids don't know where they stand anymore," Erikson said. "Daddy's not fishing, the family has closed ranks and everybody's staying home to take care of themselves. People seem jaded, scared and apprehensive. Everything's different."

Such changes can reawaken children's fears about losing their parents because adults are busy with practical problems and their own emotional difficulties.

As a result, kids may regress to clinging, bed-wetting, thumb-sucking and unwillingness to sleep at night. Psychologists say parents shouldn't worry; these reactions are normal. They recommend tolerating these behaviors temporarily to allow the child time to feel secure again.

Here are more tips from the Center for Mental Health Services:

- 1.) Encourage children to talk about what they see on television and to ask questions.
- 2.) Answer questions at a level they can understand, and don't be afraid to admit you can't answer everything.
- 3.) Let children know they can talk anytime. They'll probably have more questions as time goes on.
- 4.) Establish a family emergency plan. Feeling they can do something constructive is comforting to both children and adults.

5.) Monitor children's television viewing. Parents may want to limit exposure to graphic or disturbing programs. They also should watch reports about the disaster with children because these are times when they're likely to ask questions.

6.) Help children understand there are no bad emotions, and encourage them to express what they feel by talking, painting, drawing or playing with toys.

7.) Don't brood on blame.

8.) To offset the tragedies children see, point out good things, such as heroic actions and neighbors helping each other.

9.) Spend time with children. This will help them feel secure and calm their anxieties.

But again, the best thing parents can do is also the simplest.

"Just be honest," said Dr. Kati Arata, a clinical psychologist at the University of South Alabama. "Adults are so bad about hiding the truth from kids. Children pick up on things, and what they imagine could be worse than the reality."

Remember...

Children need to understand the reason their parents are acting differently following a technological disaster. Be honest and reassure them that the family will work through the problem together.

Children may react to stressful situations by reverting to early habits of their development such as bed-wetting, thumb-sucking and sleeplessness.

Children need to know that they can ask questions about what they see and hear and that they are secure within their families.

Allow children to express their emotions and talk about their emotions.

Show children that the adults are seeking solutions and not affixing blame or projecting anger into the family.

THE MOOD-FOOD CONNECTION: UNDERSTANDING STRESS

Everybody's heard it. "Eat something. You'll feel better."

Some trauma victims do just that to alleviate the pain and anxiety they feel after a life-changing disaster, just as others turn to alcohol or cigarettes. Such behavior isn't uncommon among those who have lived through technological disasters.

"The Exxon Valdez oil spill certainly qualifies high-stress enough to make people act out in obsessive behavior," said Dr. Steve Kroll-Smith, a sociologist at the University of New Orleans.

Food is a primary object of such "obsessive behavior" because it's regarded as a source of pleasure and comfort.

"It's a learned behavior that usually starts very young," explained Dr. Jay Mulkerne, a clinical psychologist in private practice in Mobile, Ala. "What happens is you establish a relationship between your mood and what you eat."

But that relationship can be an unhealthy, even dangerous. For example, stress can give people an "excuse" to stray from a healthy diet.

"They say, 'Sweets are usually a no-no, but I'm going to do this for myself today to feel good,'" Mulkerne explained.

The good news is that understanding this connection between food and stress is the first step to breaking the cycle.

After recognizing that food won't make problems go away, the next step is to replace it with healthy ways to deal with anxiety. Dr. Kati Arata, a clinical psychologist at the University of South Alabama, recommends managing stress through exercise, a regular sleep pattern and a healthy diet that includes vegetables, fruits, grains and complex carbohydrates.

Limit sugar, salt, saturated fat, caffeine and alcohol, and try to drink eight glasses of water a day. And don't keep tempting foods around the house.

"When you get the urge to eat, call somebody and talk until it passes," she said. "Or read a book or listen to music. The point is to minimize the opportunities to binge eat."

Losing one's appetite is another common reaction to anxiety. "Stress kicks your body into high gear," Mulkerne explained. "It all goes back to the 'fight or flight' instinct. If your body is in a constant state of alarm, it doesn't want food. The body is prepared to deal with the threat and the big meal will come later."

Once again, the way to kick the problem is to establish a healthy routine. Exercise, sleep and eat regularly "even if you don't want to," Dr. Arata said. "You must take care of yourself."

And finally, as with any problem, experts say you shouldn't be afraid to seek help.

"People going through hard times are never alone," Mulkerne said.

Why does stress affect health?

Part of the answer lies in how the brain signals the release of stress hormones, during threatening situations. These chemicals trigger the body to produce other substances to increase energy levels.

Blood-sugar levels rise, heartbeat speeds up and blood pressure increases. Muscles tense for action. The blood supply is diverted away from the gut to the extremities, helping the body deal with the event at hand.

These reactions can cause digestive upsets, headaches, tension in the neck and backaches. “Turning on the stress response for years can create even more problems,” says Robert Sapolsky, Ph.D., a Stanford University neuroscientist.

For example, persistent stress has been linked to gastrointestinal disorders, including ulcers, and to high blood pressure, a major cause of heart attack and stroke.

Aside from its effects on the digestive system and the heart, stress can suppress the immune system, leaving the body more vulnerable to infections.

When technological disasters occur, impacted people may be unaware of the subtle changes in their feelings, attitudes and behavior.

“Being under constant stress can result in a completely unhealthy lifestyle, which, in turn, fosters physical, social and emotional problems,” stated Steve Picou, Ph. D., a sociologist from the University of South Alabama.

“We often just focus on stress as an outcome of technological disasters, however, the consequences of long-term stress may include serious physical problems,” Picou concluded.

Remember...

Negative emotions may trigger the desire or produce the opportunity to overeat because we feel we deserve a treat to boost our feelings.

Limit sugar, saturated fat, caffeine and alcohol, and try to drink eight glasses of water a day.

Remove tempting foods from your home, office or workplace. Get into the habit of eating set times each day and don't snack between meals.

Stress causes people to lose their appetite, but regular exercise, sleep and regular eating habits will help the body remain healthy.

Anger and anxiety cause the body to react chemically to a situation, when the body is super-stimulated over time the physical effects could lead to heart attack or stroke.

Eating regular healthy meals, sleeping and exercising contribute to your ability to handle stress, reducing problems in the body's gastrointestinal, blood, and immune systems.

CHRONIC STRESS AND CANCER: IS THERE A LINK?

Stress plus vulnerability might equal cancer.

The equation sounds grim, especially for victims of technological disasters who can feel anxious for years afterward. The good news is it doesn't have to happen if they learn to manage the stress.

Although scientists disagree, some studies indicate depression and stress are two emotional states commonly linked to cancer. They don't cause cancer, but the studies suggest they may prey on the body's immune system and make it more vulnerable to disease.

Vulnerability is the lynch pin of the equation, according to Dr. Mike Edelstein, an environmental psychologist at Ramapo College of New Jersey.

"You're vulnerable to health problems if you're depressed and chronically stressed," he explained. "And if you're a victim, you feel vulnerable."

Depression can cause chemical changes that prompt the body to produce "'bad' chemicals," explained Dr. Kati Arata, a clinical psychologist at the University of South Alabama.

In fact, many cancer patients report being stressed or depressed before developing cancer. "And once you have the illness, stress slows down recovery," Dr. Arata said.

Other medical experts aren't so sure about the connection.

"When you talk about stress and cancer you're getting into a fuzzy area," said Dr. Marcel Conrad, director of the University of South Alabama's Cancer Center. "Some studies show a relationship and some don't. It's not easy to prove."

However, he said one thing that is certain is that stress can induce some people to do things that are bad for them and that do cause cancer.

For example, smoking can lead to lung cancer; overeating is linked with cancer of the breast, prostate and colon; and alcohol abuse (especially in conjunction with smoking) can contribute to cancer of the esophagus, tongue and mouth.

"People under stress undoubtedly place themselves at greater risk for cancer when they do these things," Conrad said. "They can worsen their prognosis by taking care of themselves."

The ways to avoid the cancer risk are the same ways to offset depression and other maladies. Eat right, sleep, exercise and avoid tobacco, alcohol, red meat and heavy dairy products.

"Stay busy and take your mind off what's troubling you," Conrad recommended. "And watching TV is not occupying your time because you're not participating."

Instead, he suggested activities such as reading, needlepoint or any form of exercise.

For proof that these ideas work, he pointed to the pharaohs of ancient Egypt.

"They didn't have much cancer," Conrad said. "They didn't smoke, they ate very little meat and they didn't live in an industrial society. The answer to cancer is to prevent it. Live like the pharaohs."

Prevention comes through education. Remember, long-term stressful situations can produce cancer in vulnerable people. Be alert to behaviors which are not good for you, which may be caused by continuing stress. Respond positively. Only you can control your lifestyle.

Remember...

Depression and stress are thought to be commonly linked to cancer through the immune system.

Chronic stress causes people to begin or increase habits (smoking, overeating, and alcohol abuse which are known to cause cancer.

To reduce your risk of cancer: eat right, sleep, exercise and avoid alcohol, tobacco, red meat and heavy dairy products.

COPING WITH TECHNOLOGICAL DISASTERS

It's been seven years since the Exxon Valdez ran aground and spewed 11 million gallons of oil into Alaska's Prince William Sound. Seven years of heartache, uncertainty, depression and anger disrupting fishing and Native communities surrounding the Sound.

Sociologists call the aftermath of a technological disaster a "corrosive community," which means people are torn apart instead of drawn together by the trauma they've suffered.

"Everybody is hurting," said Dr. Steve Kroll-Smith, a sociologist at the University of New Orleans. "They've lost a way of living, an economic investment and their sense of empowerment. Nobody escaped without pain."

In the long run, the way for people to recover from a technological disaster is to reclaim what's been taken from them: Their sense of community.

The first step is to understand what's happened, said Dr. Mike Edelstein, an environmental psychologist at Ramapo College of New Jersey.

"In a corrosive community, people feel robbed of their health, their ability to protect themselves and their families, their power of their own lives and their sense of looking forward to a happy, healthy, safe future," he explained. "Therefore, trust of government, people-everything - affected."

As a result, victims of man-made disasters naturally want to withdraw and try to shelter their own families. But following this instinct is the worst thing they can do. Personally, it leads to depression. Collectively, it leads to a corrosive community.

"A technological disaster throws into question all the ways people deal with each other and stretches the bonds that holds them together," said Dr. Kai Erikson, a Yale University sociologist who has studied these events for more than 20 years. "They don't realize how much they need each other. They close ranks and stay home to take care of themselves and their families."

And when people are hurting, it's easy to forget others share the pain. "People must understand something has happened to the community at large, not just to them," he said.

Experts say the first steps toward ending the corrosive community are personal ones.

"First, accept parts of this (disaster) will stay with you," Dr. Edelstein advised. "Second, recognize you have reason to be angry about it and your feelings are valid. And third, you don't have to forgive or forget, you can decide not to let it preoccupy you. You lost control over some things, but you can exercise control over other areas of your life."

One of the best ways to do that is to reach out to others. Even the smallest act of kindness can be the first step to collective healing.

"Help each other, even it's someone you don't like," said Dr. Bill Freudenberg, a professor of rural sociology and environmental studies at the University of Wisconsin. "If you're nice to the town grouch, maybe he won't be so grouchy to someone else. Good can be contagious."

Focusing on the few positive outcomes also can be helpful. For example, many victims of technological disasters start taking better care of themselves.

"If people have one strike against them, they want to prevent the other two strikes," said Ramapo College's Dr. Edelstein. "So they take steps such as eating right and stop smoking."

Another positive benefit is legislation targeted to prevent another disaster like the Valdez oil spill. Under the Oil Pollution Control Act of 1990, oil tankers must now receive certificates of financial responsibility, which they can buy from insurance companies. The act also increased liability limits and called for double-hulled tankers by 2015.

Drawing together to create other positive outcomes also will help people heal. For example, participate in grass roots organizations to deal with prevention, work to improve schools, or look for ways to build the community culturally, socially, and economically.

"Focus on common goals that are positive," advised Dr. Kati Arata, a clinical psychologist at the University of South Alabama. "You don't have to forget the disaster, but stop letting it control the community."

In the end, the cultural factors that make Alaskan fishing and Native communities strong will be the same ones that people will draw on to recover: Self-reliance and mutual-helpfulness.

"It's a great place to start, with decent people treating each other decently," said the University of Wisconsin's Freudenberg. "Draw on the good that's still there. These communities still have that 'oomph left deep inside."

Through education, awareness, and understanding of the Valdez disaster, residents of Prince William Sound impacted by the tragic accident can begin to transform both themselves and their communities in a positive manner. Hopefully, this series served as an impetus for such future action.

This is the last article in a nine-part series on technological disasters, their community impacts and strategies for recovery. This community education series was developed by Sound Alternatives and the Family Resource Center (Cordova), in cooperation with the University of South Alabama (Mobile). Funds for the development of this series were provided by the Prince William Sound Regional Citizens' Advisory Council.

Consultants for this series were: K. Arata, Ph.D., C. Cain, B.A., M. Conrad, M.D., M. Edelstein, Ph.D., K. Erikson, Ph.D., B. Freudenburg, Ph.D., S. Kroll-Smith, Ph.D., S. Picou, Ph.D.

For a bibliography of references: S. Picou, Sociology and Anthropology, University of South Alabama, Mobile, Alabama 36688.

Appendix C

Outreach Activity: Radio Education Program

Introduction

As a companion to the newspaper series the radio programs provide additional information related to community impacts from professionals who study technological accidents. These programs are ready for broadcast, but must have a "lead in" and "trailer" provided by the organization using the programs to be effective. The local broadcaster can be requested to read the "lead in" and "trailer" with each program presented.

The radio programs are presented on five (5) thirty (30) minute tapes. These programs should be run on consecutive evenings and repeated at least three (3) months later for maximum effect. The following steps are suggestions for use of these programs:

- Contact all local radio station managers to determine policy on airing public service information.
- Ask station managers to provide information on peak listener times.
- Negotiate for public service air time or paid air time during peak audience listening periods.
- Announce the airing of radio programs in advance through the station airing the programs, newspapers, promotional audio tapes and public scanner announcements. Contact local civic organizations, school officials, churches and community centers to announce and/or display fliers advertising the radio programs.
- Arrange for local mental health professionals to be available in the radio station each day of the airings, to provide additional information to those who call-in following the programs. If this is not possible, provide phone numbers of mental health professionals in the trailers and the time they will be available to answer questions.

You will find the following radio program transcripts in this appendix:

- Program One: "What are Technological Disasters"
- Program Two: "Community Recovery"
- Program Three: "Depression"
- Program Four: "Anxiety and Post-Traumatic Stress Disorder"
- Program Five: "Substance Abuse and Anger"

**ATTENTION: If you want a copy of the taped series,
please contact the PWS RCAC at 1-800-478-7221.**

GROWING TOGETHER

A Community Education Program

Sponsored by Sound Alternatives and The Family Resource Center
Cordova, Alaska

Developed in conjunction with
The University of South Alabama

Funding provided by
The Prince William Sound Regional Citizens' Advisory Council

Program One

What Are Technological Disasters

PRESENT: RAY FARNELL, Host

DR. J. STEVEN PICOU, Professor of Sociology, University of South Alabama

DR. STEVE KROLL-SMITH, Professor of Sociology and Director of the Environmental
Social Science Research Institute, University of New Orleans;

DR. BILL FREUDENBURG, Professor of Sociology at the University of Wisconsin
Madison

DR. DUANE GILL, Associate Professor of Sociology and research scientist at the Social
Science Research Center, Mississippi State University;

HOST: Today's program is the first in a series of five, 30-minute programs designed to provide information regarding technological disasters, their impacts, how we can better cope with such events, and what strategies communities can use to foster recovery. Today, we ask the question, what are technological disasters, and how do they impact people and communities? To address this question, we have with us four nationally known sociologists who have spent the last two decades studying various human-caused disasters: Dr. Steve Kroll-Smith, who is Professor of Sociology and Director of the Environmental Social Science Research Institute at the University of New Orleans; Dr. Bill Freudenburg, Professor of Sociology at the University of Wisconsin Madison; Dr. Duane Gill, Associate Professor of Sociology and research scientist at the Social Science Research Center at Mississippi State University; and, starting us off will be Dr. Steve Picou, Professor of Sociology at the University of South Alabama.

Dr. Picou, what are technological disasters?

DR. PICOU: A disaster is a catastrophic event which disrupts the social, cultural and economic structure of a community. Indeed, all disasters threaten community survival. We generally distinguish two specific types of disasters: natural and technological. Natural disasters are caused by extreme geophysical and meteorological activities. That is, they are unpreventable acts of God. Technological disasters, on the other hand, are caused by an extreme malfunction of human technology. That is, they are unpreventable acts of Man.

HOST: Dr. Kroll-Smith?

DR. KROLL-SMITH: Technological disasters are different from natural disasters in many ways, one being the pattern of social-psychological disruption that tends to occur in both classes of events. We know, for example, that victims of technological disasters, particularly those disasters that affect biospheric conditions, the immediate ambient air, for example, or local ground or water, tend to have long-term effects, effects that extend well beyond those of victims of natural disasters.

HOST: Dr. Freudenburg?

DR. FREUDENBURG: Let me pick up a little bit on one of the things Steve said, which is that social scientists started studying natural disasters about 50 years ago. They were trying to find out what would happen in the aftermath of a nuclear disaster of some sort, and nature gives us things from time to time that will wipe out an entire community, and they wanted to find out what the responses were. What they almost always found was that the responses were remarkably healthy. People came through in great shape, and that continued to be the consensus, I think, of just about everybody studying the field until about the mid-70s, when a number of folks started finding disasters that seemed to be very different. That, unlike your traditional disaster you didn't have what was called a therapeutic community of people coming together afterwards, a sense of euphoria that, by golly, we survived the tornado. Instead, it was a much more long-lasting, much more painful set of responses that they found, again and again and again. And after a few years of documenting this, quite a few people, including several of the folks you are interviewing today, started to realize that there was one point of commonality to all of these disasters that really had long-term disastrous consequences, which is that they were not caused by God, they were caused by Man.

HOST: I see. Dr. Gill.

DR. GILL: Well, one of the things that I find unique about technological disasters is that they have secondary disasters that spawn from them. One of the things that you going to find in most technological disasters are litigation activities, and these litigation activities consistently bring on additional stresses, additional problems, that the community has to face. Another unique feature about technological disasters is that most communities, while they are prepared to deal with natural disasters, are not prepared to deal with technological disasters. The emergency response, emergency management is there for natural disasters, but not there for technological disasters, and as a result communities suffer a lot more. There's not a good plan right now for technological disasters.

HOST: Well, Dr. Gill, do you feel that technological disasters do differ from natural disasters?

DR. GILL: Oh, definitely, they differ. Not only are they different, but technological disasters differ in patterns which are – there is a commonality of patterns to natural disasters, and there's a commonality of patterns that technological disasters create. In other words, communities respond to technological disasters in patterned ways. We can identify this, and they are not all that unique.

HOST: Dr. Picou.

DR. PICOU: One of the real critical differences, as Duane just noted, one of the critical differences is the lack of emergence of a therapeutic community in the community impacted by the technological malfunction. And – and let us think here in terms of two different patterns. One pattern, where you see people coming together, you have support mechanisms provided by the state and federal government, and then you have this outpouring of support by people who send soup and blankets and various and sundry items that will help the immediate needs of the disrupted community. The technological disaster results in a different phenomenon and, actually, we are very fortunate today to have the person who coined the word, the term, so-to-speak. Rather than therapeutic community, Dr. Freudenburg has pointed out we have what is the corrosive community, and in this situation a community fragments, segments, becomes divisive, and here we have a lot of uncertainty on the part of all of the people in the community with regards to exactly what is happening. Bill, would you like to address that?

DR. FREUDENBURG: Yes. I was trying to think of, you know, when a bunch of us academics talk to each other, we use our standard lingo, and I'm trying to remember that most of the people listening to this won't have had the cursive twenty-five years of sociological training. So, in terms of trying to put it into simple English, I think that the differences between the technological and the natural disasters – this is an oversimplification which my colleagues will jump on me for, of course – but as an oversimplification, there are three kinds of differences, and Steve Picou has just mentioned one of them. The first of them is the ambiguity of harm. People who are studying disasters of the traditional sort – floods, fires, tornadoes, and so forth – quite logically assumed that the worse the damage physically, the worse the damage would be socially, which ordinarily would make sense. If you wipe out twice as many homes, that's a worse disaster. It turns out, though, that in many cases that have been studied of technological disasters, some of the worst stresses for people are caused not by the unambiguous damage, but by the ambiguous damage. You don't know for sure if that mine fire in Centralia is going to have contaminated your home, or, if it did contaminate your home, you don't know how bad the contamination is, and there is no way you can know. You may get cancer thirty years from now, and even if you do, you won't be able to prove that it was because of that contamination incident. There is something actually that helps the healing process if the tornado has gone by and the all-clear sounds, and you can come out and you look, and within a matter of moments you can tell that your house is gone or it's not, and it's over, and you can start to cope from there. But in cases where the fish that you have traditionally eaten are contaminated, or where your children may be contaminated, where you don't know if perhaps you've passed nasty things in your own genetic material on to your children -- on to later children -- there really isn't a time when the all-clear is ever sound – sounded. So, it's the ambiguity of the disruption that's the first problem.

The second is, what I call, the corrosive community. And the therapeutic community is something that you see every time there is a natural disaster. There will be TV shows, headlines and so forth the day afterwards about the tremendous heartwarming outpouring of support. People from all over the country will drop what they're doing, pick up shovels, help the victims, and it is very therapeutic to work with people to bring society back together, to bring your community back together. What happens after a technological disaster, though, unfortunately, is typified less by that kind of outpouring of help than by an outpouring of lawyers, whose job it is mainly to avoid blame for the people they are working for. So, here is somebody digging out from the most traumatic thing that's ever hit them, someone comes to town, and instead of offering them a hand, they offer the back of a hand. They say, this didn't really happen, my client isn't responsible and it's probably your fault anyway – you're a malingerer, aren't you? There is a lot of pointing of fingers, and instead of bringing people together, what happens, in what Duane has just called the second disaster, is a driving people apart, and it is corrosive. It's corrosive to the social bonds between people, and it's corrosive to the most sensitive material inside of people.

Then, the third difference in my lingo – we call socio-cultural disruption – but basically what it means is that you come to realize that a lot of things you've assumed, just aren't so. You may not remember much from

your high school civics class, but you probably remember that the government is there to help you when something really disastrous happens. Here's something that really is disastrous and, instead of getting help from the government, the victims of these technological accidents often report that they feel victimized a second time. And if you can't believe the things that you were taught back in high school, if you can't believe the things you've taken for granted for the last thirty years of your life, what can you believe? And it's almost as if you find yourself with feet planted firmly in mid air. The things you always thought you could count on, you can't. So, the ambiguity of the harm is part of the problem. It's made much worse by what happens from other human beings after the disaster, and the net result is your whole world, your whole way of understanding the world is disrupted.

DR. KROLL-SMITH: And that's interesting, socio-psychologically, insofar as, as an adult or a young adult, if, overtime you realize that what you know about the world is – or what you don't know about the world, I should say, is less than what you know, the consequences of that are usually that the person develops what we call a vulnerable self. A self that approaches the world as if it is going to be harmed. It's as if the world has shifted from "as if" – as if I know this – to "what if" – what if this happens to me, what will I do about this? That level of uncertainty generating that change in self to – from something that is fairly firm as an adult, fairly predictable as an adult, to something that is vulnerable has long-term consequences for the self and long-term consequences for questions of recovery.

HOST: Dr. Kroll-Smith, in dealing with the social psychology of trauma, do you think that spawns a little bit of paranoia among community members?

DR. KROLL-SMITH: I wouldn't use the term "paranoia," but I would use the term "disillusionment" and I would use the term "skepticism," perhaps "hyper skepticism." I find that the term "vigilant" perhaps most appropriate, however. Most of what – as Bill pointed out – most of what can be taken for granted now is a question, and insofar as it's a question, one has to be vigilant in ways that one didn't before, and that's a burden on the self. I mean, it's hard enough to get through the day, go to your job, raise your kids, make sense out of the news, much less have to concern yourself with perhaps the immediate health effects of your local environment, the interim health effects of that environment, the long-term health effects of that environment, your relationship to extra local others who are now responsible for your destiny insofar as they're supposed to clean up the environment or help you understand your health, etceteras. When that kind of delicate fabric of what we know becomes a question, I think that doesn't create paranoia, but it does demand an extraordinary amount of energy on the part of the person that over time becomes or creates the condition for a pathology, which might be denial – I'm going to deal with this simply by denying it. And in that case, usually what happens is you have interjected anger, the person does have a reservoir of anger, has a reason to be angry, not directing anger in appropriate ways, directs it in appropriate ways, and you see problems in child abuse, in spouse abuse, and so forth. Sometimes you see some -- you find some obsessive-compulsive behavior. You find people who ritualize their lives to the point where everything becomes a kind of playing out, step by step, a kind of script, hoping that if I follow these steps nothing bad will happen to me. We see these conditions and others in communities that are among people that are responding to these types of disasters. And the outcome of this is what interests me as well, and the question, I think that interests the listeners, or at least some of them, is how can I move from being a victim to being a survivor? And one way that you can do that is to realize or to own this vulnerability, to recognize it, to acknowledge it, and to move from there.

HOST: Dr. Picou.

DR. PICOU: Definitely, in terms of what transpires, I think we have this uncertainty which is so problematic that in many cases it leads to self-isolation. Remember, the therapeutic community will bounce this. The therapeutic community has no isolation. Victims are found. They're sought out, they're supported, they're hugged. Their immediate needs are met, and there's a lot of interpersonal support. So, there is a kind of collectivism that emerges. The technological disaster, because we are dealing with something that lasts over a long period of time, as people become more uncertain, as they become more vocal, as people have their basic orientation to day-to-day reality change to focus on this uncertainty of contamination, then you have people who would rather not go out there and talk about this anymore. I'm just going to stay here in the house and I'm going

to avoid at all costs any kind of communication about it. This is part and parcel of the problem of long-term impacts from these human-caused events.

DR. KROLL-SMITH: I saw a t-shirt the other day that said “I survived Opal.” My guess is that there is a t-shirt market out there for the survivors of Opal among those residents of Pensacola and east. You will not see a t-shirt that says “I survived the Love Canal.” They’re not sure they survived the Love Canal.

HOST: So that is what we addressed when we said the residual effect is what haunts people.

DR. GILL: There’s a lack of resolution in a technological disaster. You do not know when it is over. With a natural disaster, you know when it’s over. There are stages that natural disasters go through, and these stages do not work in trying to understand a technological disaster. So, you have the lack of resolution, you have the uncertainty, frustration, skepticism, disillusionment, isolation, more stress, and these are things which you should expect people who are victims of technological disasters to experience. They are not unusual feelings for victims of technological disasters. That’s got to be recognized first.

DR. KROLL-SMITH: Let’s go back to that stage model, just for a minute, because, in the natural disaster model there are six to seven stages, depending upon who you’re talking to, but the last stage is always rehabilitation -- I’m sorry, the second to last stage is rehabilitation. The last stage is always recovery. What I’ve noticed in communities that are affected by technological disasters is they get trapped in those early stages, those warning, threat and impact stages. They get trapped in those stages, and they seem to relive them week upon week, month after month. I have not seen a technological – er, a community impacted by a technological disaster that has upset the biosphere reach that recovery stage. They remain somewhere in limbo between those three – the warning, the impact stages – those two stages.

HOST: Dr. Freudenburg, in the recovery, do you feel a need for the community to come together to try to pull themselves out of this?

DR. FREUDENBURG: There is, but it’s tremendously difficult. You asked earlier, well, is this just paranoia? Another way of thinking about it is that really those of us who think that we’re normal may be the ones who don’t quite understand what’s going on. If you just start listing all the things that could go wrong every day – your roof could fall on you and kill you as you sleep, a homicidal maniac could walk down the street with a submachine gun. You see things on the evening news sometimes, but you could list an incredible range of things that could go wrong with us every day. And we have a word in the English language that’s very useful, that these are “unthinkable” events, and part of what a normal society does, apparently, is to keep some of the unthinkable unthought. And one of the things a disaster – after a normal disaster, a natural disaster, we have a Federal Emergency Management Agency, we have authorities – think of that nice word “the authorities” – come in. They announce that certain things have been happening. The Red Cross is there, things that all of us have experience with and have some understanding of it, they all come together and help patch things together so you’re back to normal really pretty quickly. We don’t have that kind of an institutional infrastructure – to use the lingo – we don’t have that kind of organizational backup for a technological disaster. Instead, we have lawyers after lawyers after lawyers. We have people who are suing each other, who are mad at each other, who are mad at the people who are suing them. You have some people who didn’t do too badly and you have other people who, maybe because they’re involved in lawsuits may have something to be gained by having those who didn’t suffer so badly start to ask questions out loud about whether their friends and neighbors maybe are malingerers, maybe they didn’t really get hurt so badly. And that’s what really hurts is when the people who are close to you start raising questions about you, and, unfortunately, a lawyer whose job it is to represent a client and not to make people healthier knows full well how effective that technique can be. So, it’s entirely possible that the very things that would help the most in moving people back to normalcy, you’re not going to see, so long as there are lawyers involved.

HOST: Is there – to any one of you – do you find a difference in the size of the community that the technological disaster affects, in the way that they respond or recover?

DR. KROLL-SMITH: Well, communities have histories. All communities have histories, and those histories kind of load the dice for a particular kind of response. In communities that do not have good conflict resolution skills or have not developed collective conflict resolution skills, might have particular kinds of problems with these – with these disasters. But, I think that one could argue that rural communities are, perhaps, more vulnerable than urban communities to these kinds of events, if for no other reason than rural communities are dependent upon extra local centers of authority and resources, etc., for almost everything that goes on with them, certainly with a disaster that's beyond their means to manage. Urban centers, by their very size have more resources at hand for managing these – and also, by the way, we have done a fairly good job as a society of moving these technological risks, particularly those that affect the biosphere, towards communities that can't by their – that by and large are politically vulnerable to these kinds of events. I mean, two-thirds of the Hispanic community, for example, lives on top of, next to, or down the road from a hazardous waste facility. So, we've done a fairly good job of isolating settlements and making them more at risk, perhaps, than the urban settlements.

DR. FREUDENBURG: Rural communities can also be more at risk for just the opposite reason, which is that a lot of times people in rural areas have learned how to get along by depending on each other, and it is often, particularly in those communities where having the support of your friends and neighbors taken away from you by this kind of corrosive community, where that can be the most disruptive.

DR. PICOU: In fact, I think the research record is pretty clear on this. I know the research that has been conducted following the release of radioactive water vapors into the air at Three Mile Island, we don't know how much was released, and, again, this shows you the uncertainties there, but we do know that after eleven years of research and well documented empirical research, I might add, we find that we have not only what would be called cognitive signs of stress and what we're talking about, that the people have intrusive recollections, ideas about the event pop into their head, etcetera, etcetera, but we find that there are physiological effects and these long-term outcomes. That is, people who have been angry for eight to nine years seem to be more vulnerable to various stress-related illnesses than we first expected. So, really, the pattern is one that we should take very serious heed of in the sense that technological disasters certainly last, their impacts last longer, and, in addition it seems that these impacts are very serious, not only for group functioning and individual behavior, but individual health.

DR. KROLL-SMITH: Right. These impacts are character-illogical. They change the self – in ways that the impacts of a natural disaster do not. By character-illogical, I mean that the self sees or the person redefines themselves, often as less worthy, often as a person with less self-respect. Certainly, a person with a diminished sense of efficacy. These are character-illogical changes that are, in my mind, markers of a personality distortion that far exceed what we typically find in natural disasters. Remember that, even if you lose a loved one, God forbid, in a natural disaster, our culture teaches you how to mourn. You know how to mourn. As difficult as that is, the pattern is in place. When your self or when you as a person are experiencing the kinds of events that have been described thus far, there are no scripts, there are no lessons, there are no books, there are no collective understandings of how to make sense of what it is that you're going through. And, Steve talked about that sense of social isolation, and I would suggest also that the personality feels isolated, insofar as it doesn't have the kinds of resources that are available when other kinds of traumas affect that individual.

DR. FREUDENBURG: In fact, if there is a cultural pattern out there, it's a pattern of blaming the victim. Steve just used the words, the phrase, that the people who have been victimized feel as though they are less worthy. There are other folks out there, many of them being paid quite well by the hour, whose job it is to say this person is a malingerer, it's all in his head, she's making it up, he's a whiner. And, in fact, the research shows pretty convincingly that these are real impacts. It also shows pretty convincingly that the affects of the lawyers and the other finger-pointers is part of the problem, but there is no way that I know of that somebody can make up a different catecholamine level in their blood five years after an accident. And these are the kinds of things – it doesn't seem to make much difference how it's measured, whether it's measured qualitatively, quantitatively, with survey instruments -- meaning, you know, I feel bad, I feel good – or with blood sampling. You find levels of stress that are substantially elevated years after the accident. And, again, this is in comparison with natural disasters where a week or two later, outside of, you know, having a sense of, boy, there's a lot of work left to be done, most of the psychological damage is gone.

HOST: And with that interesting comment, we will close today's program. Be sure to be listening next time when we will focus on community recovery. I'm your host, Ray Farnell, inviting you to join us again for Growing Together, a community education program sponsored by Cordova's own Sound Alternatives and the Family Resource Center. This program was developed in cooperation with the University of South Alabama, funding provided by the Prince William Sound Regional Citizens' Advisory Council. If you have questions or comments regarding this program, please stay tuned as most stations will air a live call-in program dealing with technological disasters.

GROWING TOGETHER

A Community Education Program

Sponsored by Sound Alternatives and the Family Resource Center
Cordova, Alaska

Developed in conjunction with
The University of South Alabama

Funding provided by
The Prince William Sound Regional Citizens' Advisory Council

Program Two

Community Recovery

PRESENT: RAY FARNELL, Host

DR. J. STEVEN PICOU, Professor of Sociology, University of South Alabama

DR. STEVE KROLL-SMITH, Professor of Sociology and Director of the Environmental
Social Science Research Institute, University of New Orleans;

DR. BILL FREUDENBURG, Professor of Sociology at the University of Wisconsin
Madison

DR. DUANE GILL, Associate Professor of Sociology and research scientist at the Social
Science Research Center, Mississippi State University;

HOST: Today's program is the second in a series of five, 30-minute programs designed to provide information regarding technological disasters, their impacts, how we can better cope with such events, and what strategies communities can use to foster recovery. Today, we will focus on community recovery. To address this question, we have with us four nationally known sociologists who have spent the last two decades studying various human-caused disasters: Dr. Steve Kroll-Smith, who is Professor of Sociology and Director of the Environmental Social Science Research Institute at the University of New Orleans; Dr. Bill Freudenburg, Professor of Sociology at the University of Wisconsin Madison; Dr. Steve Picou, Professor of Sociology at the University of South Alabama; and starting us off will be Dr. Duane Gill, Associate Professor of Sociology and research scientist at the Social Science Research Center at Mississippi State University.

Dr. Gill, are the communities around Prince William Sound really that different from other communities affected by a technological disaster?

DR. GILL: I think if you look at communities that have been impacted by technological disasters, communities such as Love Canal in New York, Three Mile Island, the Livingston Train derailment and various other communities that have been contaminated by hazardous waste or hazardous waste sites, you find common patterns. And all these common patterns we've talked about in the past, about the uncertainty, the lack of resolution. So what's going on in communities of Prince William Sound are normal, normal responses to a technological disaster. The literature that is starting to come out that compares the psychological and the sociological responses of residents to Three Mile Island or Love Canal or Times Beach, Missouri, that was contaminated by dioxin, Centralia, Pennsylvania, that had an underground mine fire – has a underground mine fire under it – suggest that the patterns that we're seeing are not dissimilar from the victims of violence. Victims of violence tend to find themselves unable to trust their immediate surroundings, they find themselves behaving in untoward, that is, strange, ways. For example, we find that children who are victims of family abuse often do poorly in school. Children at Love Canal did poorly in school during the active phase of the disaster. Children in Centralia, their grades dropped over the years as this disaster unfolded. We find in victims of violence a tendency for some kind of substance abuse and addiction behavior, or addictive behavior. We find marital problems in families in which a person has been a victim of a violent crime. We find relationship problems emerging in victims of technological disasters. These patterned responses, these similarities in patterns, suggest that it might be helpful to begin the process of recovery by understanding yourself as having experienced a violent event and begin to move in the way in which victims of violence move, towards resolution of that violent event.

DR. PICOU: The larger society has some level of understanding about victims of violence, but the larger society doesn't have a very good understanding about the victims of technological disasters. They can't understand why these communities just can't get over it. The larger society doesn't understand the problems that are common to a technological disaster, and that puts extra pressure and extra stress on that victimized community.

DR. GILL: Also, it's not uncommon for victims of violent crime to be expected to recover rather quickly from that and re-enter normal life. But, you're right, there is a way in that violence is known in a distinctly different way in which this technological violence is a mystery.

DR. PICOU: Following up on your comments, Steve and Duane, it's interesting to note that in our research in Prince William Sound we have found that the stress levels remarkably follow a pattern quite similar to rape victims in terms of the actual numbers we're talking about here. Certainly, this is a comparison, but it is a comparison that provides us with some enlightenment with regards to the intensity of the chronic or the long-term pattern of stress. And if, in fact, victims of the Exxon Valdez oil spill three years after the spill had measurable, documented stress levels that were equivalent to rape victims some twenty-four months after experiencing the assault, I think that tells us something too, because these are real numbers, and they show quite clearly that we do have a very consistent parallel here.

DR. KROLL-SMITH: I will say this about the status of a victim that probably needs to be said. It's not a status from which personal development, a sense of biographical fulfillment, is possible. It is an arrested state of development. And the question becomes for any individual how to move away from, if possible, to get out of that status – this victim. But this notion of the victim has permeated society, and it makes it more difficult for those people who are actually suffering from a crisis state to claim that identity with any legitimacy, and then to move

from it to something that would allow them to continue their course of life development. But, in sum, to remain a victim is to remain arrested in your capacity to develop.

HOST: So, not to wear that victimization as a medal, but to move beyond that. Do you find that happening sometimes, people glory in the disaster, so to speak?

DR. KROLL-SMITH: Well, there are secondary gains to being a victim. But there are – and, clearly, if I have the flu, for example, I can get some sympathy from my family, limited but nevertheless some sympathy from my family. I see very few secondary gains associated with the victims of technological disasters. In that sense, it's an authentic victimization, in a way in which, perhaps, a fabricated one to get sympathy is clearly not.

HOST: Sure.

DR. FREUDENBURG: Also, Alaska is not exactly known as a place that likes whiners. In fact, the one other commonality across the technological disasters we haven't talked about too much is that a lot of times the people who are the victims feel as if they are the only people in the world who feel that way. It must just be me – is the common refrain. A lot of people don't realize how many others are in the same boat that they're in. But Steve is right that that is a first step, to realize that there are a lot of other people going through the same thing that you are, they feel the same way, what you're feeling is real, it is normal. You don't deserve to be called a malingerer just for that. But that eventually, even though it is real and it does hurt, you need to move out of it because, in fact, the support system that's out there for natural disasters, the Federal Emergency Management Administration, or even the kind of rape crisis line, rape crisis support line that we have for other kinds of criminal victimization, just aren't there for the technological victims. They really do need to have some of that legendary independence of Alaskans.

DR. KROLL-SMITH: That's right, and that would be true if you were in Iowa or California or Alaska. Insofar as the one thing the victim has control over is his or her emotions, if they choose not to exercise that control, it's going to be very difficult for them to move out of that victim status, or if they don't recognize they have that control, it's going to be very hard to move out of that victim status. But the one thing that they can control is their emotional response to what goes on, and that's the place where you start to recover. Once you're recovering, in a very primitive sense, is control over your affective and emotive state, which, by and large has been running out of control since the fear of the spill or the fear of the gases or the fear of the toxins enters the environment and causes this host of unknowns. The natural response is if I can't understand it cognitively, I'm certainly going to act out emotively about it. And eventually what the person learns is that simply acting emotively or acting effectively is really the only thing that they can do. That's really the place to start in the process of moving out of that notion of victim is to claim some control over the emotions. What I can control is how angry I'm going to get about this.

DR. PICOU: And, and, you know, this becomes extremely problematic because what happens is that immediately following the technological accident, oil spill, mine fire or whatever, people are outraged, they're angry, and they're mad, and they're mobilized, and they're moving, and they're responding, and they're trying to come to grips with this phenomenon. But, by definition, the phenomena, you can't come to grips with it. And over time, as the impacts continue, there is a phase of burnout, where people just get completely fed up with it. Now they're in a double bind because they're still angry and they don't have the energy or the wherewithal to continue the fight, and I think this is the chronic nature of the phenomenon we're talking about, and it needs to be recognized because you certainly can't stay mad for five years. If you do, you're going to be very tired. It seems to be that straightforward.

HOST: Well, what about people who say, well, things will never be the same. Do they need to just accept and move on or

DR. KROLL-SMITH: I remember a case I was involved in, one of these toxic tort litigations, the plaintiff group kept saying to the attorney I want you to make us whole. I want you to make us whole again. I want this suit to make us whole again, and he was smart enough to say to them, it's not going to make you whole again.

We can't give you enough money in the world to make you whole again. And when I came in later and said to them, which perhaps some of them didn't want to hear, was that ultimately it was their responsibility to make themselves whole again. That does not take responsibility away from the polluter, it does not take responsibility away from the community that was non-supportive, but it does place the immediate responsibility about whether I'm going to be a whole person again on the individual.

DR. FREUDENBURG: There are things that we do in the criminal justice system. I mean, sometimes it's seeing the criminal punished that in a sense helps the family of the victim feel better afterwards, but that still leaves the victim and the family of the victims in that victim role. And some of the people in this room have done some of the leading research on the topic that part of what happens – let me back up just a step. What happens after a disaster tends to be a negative self-reinforcing spiral. People feel horrible, they are treated like dirt, that makes them angrier, they treat each other worse, the community splinters. It just goes down and down and down and gets worse and worse. One of the things that the people on your radio program today have done some of the research on is the importance of making a decision, and I'm not sure how you can find the strength to make this decision, but some people can, to step out of that self-reinforcing spiral-- anger, hurt and victimization – and start trying to help some other people. Just to refuse to accept the next – it's a little bit like a childhood game where two kids are calling each other names where one of them, for whatever reason, decides to stop calling the other one a name, and that ability to choose, just in the act of choosing, that may be one of the things that helps to break the spiral a little bit, just to say I'm not going to do this any more. I'm going to start trying to speak out in a more positive way to people in town, even if I don't really like them or I'm still mad at them. I'm going to start letting bygones be bygones.

DR. KROLL-SMITH: That's excellent point because to get back to this idea of a victim, one can't be a victim and also be a parent. One can't be a victim and be a friend. One can't be a victim and be a professional or work in the shipyards or whatever it is that one does. One is simply a victim. It's a master status. I mean, it captures the person. And what that means is essentially is that the person is extraordinarily self-absorbed. And there's a period of time when you need to be self-absorbed in which you need to do everything you can to keep yourself afloat. And I'm not saying that to – that someone who is a victim is necessarily someone who has a problem. At a point, however, if the self is going to continue on its life course, whatever direction that might be, it is going to have to release itself from this idea of being a victim, allow itself to be a friend again -- allow the person to be a friend again, allow the person to be a husband again, a wife again, and so on. If you talk to a family of a victim, you'll hear that family phrase that victim in such a way as that person is almost now outside the moral boundary of our little community here. We love that person, we hurt for that person and so forth, but they're really not part of us now, they're a victim. So the question for the person is to get back into that moral community, and Bill pointed out a very good way to do that, and that is to turn your attention when you can, when you have the energy and the resources to do it, away from yourself and on to someone else or on to some other activity.

DR. PICOU: That's very important, Steve, and I think the different kinds and types of victims of technological disasters needs to be discussed. For example, you can have a direct victim. Let's take the Exxon Valdez oil spill. In this case, the direct victim would be people who experienced oiled resources directly or people who commercially fished in Prince William Sound and their resource was very much oiled and threatened. So, you have people who were directly impacted. Then you have people who are indirect victims, and here we have the businesses and the various crafts and skills and work activities that support commercial fishing. Certainly, in this case, the impact of the disaster is indirect on them, but nonetheless real. Then you have what we would call context victims. In this case, this would be people who are maybe not directly or indirectly impacted, but who actually observe the problems that we've discussed on the program today, the problems of uncertainty, quarreling, fractionation, segmentation in the community, and they just don't understand why those people can't get along, why they can't quit whining, and so they're upset by social context in which they live. They will tell you, I wasn't affected, I'm not hurt, but all those other people are just crazy. And then you have what we would call entry victims, and these would be people who come into the community over time, the impacts are continuing, they enter into the community, they have no understanding of the history, the nature of the victimization, they see people in trouble. They enter and they become part of the chronic impact and they experience problems directly relating to the original event. So there are various types of victims of these things.

DR. KROLL-SMITH: I would also say – and if you’re paying attention, you hear us shifting back and forth from a kind of collective idea of victim to the person as victim, and they’re both germane to any discussion of technological disasters. Going back to the person as victim, I would say that helping the individual understand how he or she is responding to this event is not independent of that individual appreciating that they had a personality prior to the crisis, and that this personality has learned how to respond to stress. It may have learned some good things about how to respond to stress, and it may have learned some bad things about how to respond to stress. Both of these things will be important in how that individual responds to the present crisis. So, if you will, the pre-spill personality of the individual will be a factor, and how that personality makes sense out of, adjusts, or fails to make sense out of and adjust to the present crisis. And I think it’s important then to encourage the person to be looking at those patterns that help them respond to crises in the past and those patterns that kind of got in the way of their ability to respond to crises, and watch those patterns, monitor those patterns, be reflexive about those patterns as they face this kind of long-term crisis of a technological disaster, because those, if you will, those pre-spill personality characteristics will play into how they are responding to the present event.

DR. FREUDENBURG: Also, to the extent they are able to, they may want to try to think about the people around them. We all know that some of our friends need different kind of strokes than others do, but if there is a self-reinforcing negative spiral and you want to break that spiral, and if you are able to break it in your own case, you may be simultaneously helping somebody else to break it. Maybe you can offer a little bit more kindness than you absolutely need to offer to someone in a way that will help that person feel better and to help someone else in turn. I mean, it’s possible for a spiral to start spinning in the other direction too. It’s a lot harder and it will take a lot longer, but it has to start someplace.

DR. GILL: I think to get back to the original question and maybe summarized some of this, can you return to the way that it was? I don’t think you can. You can transform into something else, whether it be transformation by an individual or community transformation, and it is really up to the individual and the community to choose how that transformation will take place, and I think that is where we need to be looking at. You’re not going back. You can’t get back to where you were, but you can choose where you want to go.

DR. PICOU: And certainly a key in this turning point is education. People who have been victimized by technological disasters, first of all need to understand the nature of the beast, so to speak. Professor Kai Erikson, in his latest book, calls it a new species of trouble. And I think this is very informative. The title is very informative. So, education can first of all allow people to be conscious of what happened to them, to understand their situation, as well as provide a basis for developing leadership. Certainly, good leadership has to emerge, an educated, informed leadership, and then access to expertise and being able to develop some type of actionable strategy from the education, from the leadership, and from the available expertise. I really believe that most people are unaware of the fact that technological disasters are in and of themselves a new species of trouble. Therefore, we must respond in new and imaginative ways to try to provide some basis for fostering community transformation or some type of recovery dimension.

DR. FREUDENBURG: And we need to educate, not just the people of Cordova and Prince William Sound, but all the rest of us as well. This really is a new species.

DR. KROLL-SMITH: Well, the people of Prince William Sound will educate us in their responses.

HOST: Well, gentlemen, this has been all very informative. In our closing remarks, I would like to go around the table and maybe we can address what can people do to help the situation in their communities. Dr. Picou, if you would start off the responses.

DR. PICOU: Well, we certainly know a little more today about the chronic impacts of technological disasters than we knew, say, ten or fifteen years ago, and certainly one of the needs that is critical is that people should be sensitive to others, and essentially there should be an effort on the part of members of the community to understand. I think Bill Freudenburg said it perfectly a little earlier, that you may want to go out, a little extra effort, to try to understand that certain people may be having serious problems because they have been impacted

by a technological disaster. So, certainly, I think, in a very basic way, hugs would certainly help a lot, and understanding certainly would help a lot, and I think a renewed interest in the community as a collectivity, and commitment to contributing to where that community is going to go into the future.

DR. KROLL-SMITH: If I had to give a community a mantra to say over and over again as it works its way through this crisis, it would be something like, we are all hurting but in different ways. And if you can approach one another and yourself in the manner in which – in that manner – and saying in effect, well, my neighbor has a different set of concerns, but he's hurting. I myself have a set of concerns, I'm hurting. And if you can sort of remember that everybody is hurting, but they're not hurting in the same way that you're hurting. They are hurting in a little different way, but hurting is hurting. That might be a basis for beginning to manage the stress that appears at the collective level and also at the personal level.

HOST: Dr. Freudenburg.

DR. FRUEDENBURG: I guess I would – to try to wrap up – focus on four lessons, one of which do something that the residents of Prince William Sound and other technological disaster areas have taught researchers, the other three being what I, as a researcher, would like to offer back. The lesson that they've helped teach me and people like me is that the way we used to think about trauma was that it was an individual characteristic. There is something wrong with Uncle Jack. He is crazy. He is a crazy individual. What we find, not just in Prince William Sound, but over and over and over again in cases of technological disaster is that there is pain not just in each individual as an isolated atom, but that there is a pain in the whole community. Some of the injury has been not just to the tissues inside of the head, but to the arrows that hold us all together or push us apart. The trauma is collective, every bit as much as it is individual, and in a strange way I think those of us who are researchers owe a debt of gratitude to the people of Cordova, Tatitlek, and the other communities in the Sound for helping to teach us that lesson. What can we as researchers offer in return? One of the things we know is that if you live in Prince William Sound, you may be one of the people who is feeling a lot of pain. You certainly know other people who are feeling that pain. Number one, that pain is real. It is not just in your head or that other person's head. Number two is that that pain is not your fault. It's not the fault of you, your friend, your cousin, your neighbor, the person across town. It was caused by this technological accident, which was caused by human beings who weren't doing what they should have done, and to feel anger at that is perfectly reasonable. Lesson three though is that while the accident was not your fault and while the pain is real, what you do about it is your choice. What can we, as researchers, offer in return? One of the things we know is that if you live in Prince William Sound, you may be one of the people who is feeling a lot of pain. You certainly know other people who are feeling that pain. Number one, that pain is real. It is not just in your head or that other person's head. Number two is, that pain is not your fault. It's not the fault of you, your friend, your cousin, your neighbor, the person across town. It was caused by this technological accident, which was caused by human beings who weren't doing what they should have done, and to feel anger at that is perfectly reasonable. Lesson three though is that while the accident was not your fault and while the pain is real, what you do about it is your choice.

HOST: And, finally, Dr. Gill.

DR. GILL: I would say that you should remember first of all that you're not alone. It's typical to feel certain things that you're feeling. It's not abnormal to feel these things. You should educate yourself as to what happens in technological disasters and realize again that you are not alone, and finally, you can help yourself and help your community by helping others.

HOST: And with those interesting comments, we will close today's program. Be sure to be listening next time when we will focus on individual reactions to technological disasters and coping skills. I'm your host, Ray Farnell, inviting you to join us again for Growing Together, a community education program sponsored by Cordova's own Sound Alternatives and the Family Resource Center. This program was developed in cooperation with the University of South Alabama, funding provided by the Prince William Sound Regional Citizens' Advisory Council. If you have questions or comments regarding this program, please say tuned as most stations will air a live call-in program dealing with technological disasters.

GROWING TOGETHER

A Community Education Program

Sponsored by Sound Alternatives and the Family Resource Center
Cordova, Alaska

Developed in conjunction with
The University of South Alabama

Funding provided by
The Prince William Sound Regional Citizens' Advisory Council

Program Three

Depression

PRESENT: RAY FARNELL, Host

DR. KATI ARATA, Assistant Professor of Psychology, University of South Alabama

DR. KENT WELSH, practicing psychologist, Mobile, Alabama

DR. J. STEVEN PICOU, Professor of Sociology, University of South Alabama

HOST: Today's program is the third in a series of five, 30-minute programs designed to provide information regarding technological disasters, their impacts, how we can better cope with such events, and what strategies communities can use to foster recovery. Today, we will focus on depression and how it impacts victims of technological disasters. We will also address how people in affected communities can respond. To address this topic, we have with us two clinical psychologists: Dr. Kati Arata, Assistant Professor of Psychology at the University of South Alabama, and Dr. Kent Welsh, who has a practice in Mobile, Alabama. Also joining us is Dr. Steve Picou, Professor of Sociology at the University of South Alabama.

Dr. Picou, give us an overview of our previous programs, and then tell us about today's focus.

DR. PICOU: In the last program, we discussed the impacts of technological disasters, how communities respond, and mapped some strategies for community recovery. One of the individual symptoms of technological disasters is a depressive reaction on the part of some individuals. Now, essentially, depression is a very common psychological malady throughout the society. There is a normal rate of depression, and, in fact, most people at one time or another experience some bouts with depression. The important characteristic here is that for technological disasters we know that the impacts last a very long time. Given this, we found in research at places like Three Mile Island, Love Canal, Chernobyl, a sense of depression among victims. Certainly, our data and our research in Prince William Sound demonstrates that depression is also characteristic of a number of victims of the *Exxon Valdez* oil spill. So, essentially, we are isolating one individual response and we're going to focus on what it is and how individuals can cope or better respond to this negative impact of technological disasters.

HOST: Dr. Arata, what is depression?

DR. ARATA: Depression is an everyday term that we use for a mental disorder called major depression. Major depression is very common in all people. In fact, as many as one out of four women and one out of eight men will experience major depression at some time in their lives. Many people think of depression as being like the common cold of mental illness because it's so common. Lots of different things can cause major depression. One of the causes that's relevant here is that stressful events are very often a cause of depression in people. We also know that, without treatment, as many as fifty percent of people who have major depression will continue to have problems as long as a year. So, it can be a serious problem that can affect people's physical functioning, their social functioning, and even their role functioning.

HOST: Are there many cases of major depression associated with technological disasters?

DR. ARATA: Definitely. We find that with the long-term impacts, as people start realizing the kinds of effects the disaster may have had on their lives, depression can be a chronic problem that's being produced. We know from research we've done in the Cordova community that as many as thirty percent of the people we surveyed were currently experiencing significant symptoms of depression.

HOST: Dr. Welsh.

DR. WELSH: Well, one of the things that I think is important here is that we think in terms of the matter of degree. Everyone experiences periods of sadness, periods of grief, periods when they are in a bad mood, and those are sort of minor instances of what we're talking about here as depression. When those experiences last for a long time, when the period of time that I feel sad last for a long time, then we start calling it depression. And so we're really talking a matter of degree and a matter of something that everybody has experienced, but perhaps not to the extent of being clinical depression.

HOST: Dr. Picou.

DR. PICOU: Yes, I think that when we look at technological disasters, we find that the inability to reconcile the disaster and the inability to generate a therapeutic community in which people can express their concerns and their emotions, over a long period of time then people tend to become a little more reclusive, and depression of course is a consequence of this pattern.

HOST: Dr. Arata, are the people in the Prince William Sound area that different than others who have experienced a disaster?

DR. ARATA: Well, the main difference might be the differences that you find sometimes with natural disasters versus technological disasters. With the natural disasters you typically find with the research that the effects are more short term – and also more immediate – that a natural disaster is often so immediately devastating that you have a lot of high levels of stress and symptoms immediately after the disaster, and that begins to taper off. But the technological disaster, which you may find is rather a slow increase in symptoms, that it can take time for the full impact to really be recognized by the community, and so rather than that high level initially with natural disasters that tapers off, you actually get maybe a more insidious onset. It just kind of slowly builds as the impact of the disaster becomes more obvious. As more and more problems develop, then the symptoms may increase.

HOST: So, depression comes on so slowly sometimes that a person may not realize that he or she is experiencing depression?
Dr. Welsh.

DR. WELSH: That's right. It can be a very slow onset type of problem that builds up over a period of time, and then at some point the person begins to realize, hey, I really feel miserable – this is – my life just isn't going the way I want it to -- and at that point the person begins to identify perhaps with the label of depression. But, hopefully, being able to recognize some of the signs and symptoms a little earlier can kind of head that off, can kind of prevent some of the more serious depressive problems.

HOST: Are there particular types of depression that apply only to areas that have been affected by a technological disaster?

DR. ARATA: I think, as Dr. Welsh said, really it's going to depend on the degree we're looking at. That -- it's very possible when a disaster hits that nearly everybody in the community probably experiences some of the symptoms of depression. What's going to happen is, over time, many people, the symptoms will go away. For some people, the symptoms will continue. Some of the signs for somebody that they have a serious depression would be things such as, in addition to having a depressed mood which we think of as being depression, they also have problems such as having difficulty sleeping, problems with their appetite, having a decrease in energy, not feeling like doing the things they normally want to do. Also, finding that when they do things they normally do, they don't find any pleasure in those. So, they have a decrease in the pleasure they get in their activities. They also find that they have low self-esteem, feel bad about things, tend to blame themselves for things, difficulty concentrating and difficulties with attention, and in very severe cases you could even find that people might even become suicidal. Again, most people aren't going to have all these symptoms, but for somebody who has four or five of these symptoms, it does suggest a serious problem.

HOST: Dr. Welsh.

DR. WELSH: In terms of the symptoms of depression, one of the other symptoms is change in appetite. Sometimes people will eat too much during this period of time, and sometimes they'll eat too little, and so change in weight, weight gain, weight loss, that's a symptom. But there's another factor that I think pertains particularly here to a technological disaster, and that is a feeling of helplessness, that this often precedes and really makes worse the subjective feeling of depression. When I feel helpless, when I feel like I can't really do anything about myself and my condition and the things that are happening to me, well, then, one of the things that happen is that I tend to give up, and when I give up that's when I start feeling depressed.

HOST: Well, Dr. Arata, we've talked in general about signs and symptoms of depression. Let's focus in now on signs and symptoms of depression that are found in areas affected by a technological disaster.

DR. ARATA: Well, probably the biggest thing you're going to see is the isolation that -- one of the things you find when people are depressed is there's a tendency for them to withdraw. Part of that goes with the

symptoms. They don't have any energy, they don't feel like doing anything, they don't get any pleasure in things, and what happens is this creates sort of a vicious cycle. They don't feel like doing anything, so they stay at home and isolate themselves, and that may well be the one thing that they could do to feel better, would be to get out and do things with people. So, that can be one of the major problems that people tend to isolate themselves. This also fits with the problems with trust that Dr. Picou brings up. As people's loss of trust increases, one thing that will happen is that not only will they stop trusting institutions, but they may even stop trusting each other, and so people are more likely to isolate because they don't even feel like they can trust each other now. Following a disaster, while initially people may pull together, over time resentments can occur as people may feel that somebody else got a better deal, somebody else is getting away with things or whatever. So it really divides up the community as they're all fighting for this common pot.

HOST: Dr. Welsh, do community members tend to turn on each other as a result of depression and then not know why?

DR. WELSH: Well, that's certainly a possibility that you're increased irritability, increased dissatisfaction, with the way things are going for myself, those kinds of things can certainly impact interpersonal relationships, and people can certainly get on each other's nerves, so to speak, and lead to further breakdown in the more traditional communication patterns in the community, breakdown the relationships. Maybe I've been getting along fine with my neighbor here for a long time, maybe we'd go down and work on the boat together, but, you know, maybe I'm just not feeling like it any more, and so I'm no longer carrying on that relationship as I had before. As Dr. Arata mentioned, people will tend to withdraw, and that kind of thing will pull the community apart and keep people from interacting.

HOST: Dr. Picou, is there a problem with depression among those community members in the Prince William Sound area affected by this technological disaster?

DR. PICOU: There's a significant problem of depression for people who have been victimized by the oil spill for a long period of time. Certainly, we've got to be aware of the fact that sometimes events seem totally uncontrollable. People who live in the Prince William Sound area are very self-determined, hardy, individualistic-type people. They have their own control of the situation. And I think that the data from Three Mile Island, Love Canal, and other major technological disasters in the past, we find that, with time, the continuing characteristic is depressive symptoms. Essentially, the opportunity for understanding that this is a common characteristic, not only is it common for other victims of technological disasters, but it's a common characteristic throughout the population in general, I think that the first step toward responding toward depression is to have a firm grasp of what it is, the fact that it's exaggerated with long-term technological disaster impacts, and we need to meet it head-on, so to speak, and to try to overcome it.

HOST: Dr. Arata, let's talk about isolation. Now, the people of this area are very self-reliant, so isolation in itself is not bad, correct? It's when people intentionally isolate themselves that you see a problem come up?

DR. ARATA: Definitely. What we're looking for is kind of a change. These people may not be people who did a lot of social activities before, but what they did do is now being decreased. And, again, it's that difference – I choose to be alone because I want to reflect on things versus I'm just going to shut everybody out because I don't feel good, I don't want to talk to anybody, I don't want to do anything. So, it's a different kind of isolation than perhaps just being alone. It's really two different things.

HOST: Dr. Welsh, what are some other symptoms of depression?

DR. WELSH: Well, there are some particular thought patterns and beliefs about the world that people will often sort of get into as they're becoming more depressed. Oftentimes, people will start to have more negative views about themselves. They'll start thinking more negatively about themselves, and this, again, relates to the helplessness that I, in the past, may have been quite self-reliant, quite able to take care of myself, but now I can't so well, so I'm not as good a person for some reason, I'm not as able to do things as I was. Another idea is that I'm not getting as much pleasure from the world, that things around me aren't going the way I would like them,

that the environment isn't the way I want it to be, and so the person begins to think negatively about what's going around him or her. And the third part of these, the third thought, is that the future is not going to get much better, that things are going to stay the way they are, that I'm not going to be able to improve or that things are not going to improve around me. So, basically, those three ideas are kind of summarized in the idea that I'm no good, the world's no good, and it ain't gonna get no better.

HOST: How do community members perceive the impact of a technological disaster?

DR. PICOU: Well, I think the impacts are perceived from a number of different ways. First of all, there's the direct contamination of the biophysical environment, which is something that was horrendous certainly when the spill occurred. You also have the fact that the spill generated the litigation. And I know that there are people probably listening to this program and they can't figure out if they're more depressed over the spill or over the litigation. And that point is made to demonstrate that there are secondary activities which are very disastrous to people who live in communities that have been impacted. The litigation, certainly, again, adds fire – flame – fuel to the fire, so to speak, and so we have a compounded situation. Of course, in communities that are heavily dependent upon the environment, such as Cordova, where we have resource harvests of fish and various other things that make up the community's activities on a yearly basis, I think the issue here becomes very much the future. Consequently, as people ponder the future and they're all devoted, let us say, to commercial fishing, subsistence harvest, etcetera, certainly depression has impacts on families and people around. So, essentially, what we're talking about is a slow process over time where the chronic consequences are almost as debilitating as the immediate, acute, initial consequences.

HOST: Dr. Arata, let's focus on management and treatment options for depression.

DR. ARATA: Well, I think that there are two ways of dealing with depression. One, you may be trying to deal with it on your own, particularly if it seems like you don't have that many symptoms. The other issue is going to be when should you go for help? Maybe first we can talk about some of the things you can do for yourself, just to see if you can pull yourself out of the depression. Some things involve just changing your behavior. Recognizing that a tendency to isolate and withdraw is a symptom of depression and can actually increase depression, the person may try to actually make themselves do things to stay active. While they may not initially enjoy doing things that they used to do, over time they'll find that it kind of pulls them out. We've all experienced probably how it feels to sit around all day long, and the longer you sit there the less you really want to do anything. Yet, when you're very busy, you start to get more energy and be more interested in doing activities. So, staying active or getting active may be part of it. And by active we mean just enjoying hobbies, doing things with people – exercise can be a very beneficial thing for dealing with depression. Other than just being active, it also can be useful because of the kinds of chemical changes it can produce in your body, and if you've been gaining weight from an increase in appetite with depression, exercise might be part of that solution.

HOST: Dr. Welsh.

DR. WELSH: Well, I wanted to underline what Dr. Arata is saying and emphasize -- do something. The motivation to get out and move around may be kind of low, but do something. Go down and change a winch on the boat, go down and change a distributor on your truck. Do something that will be getting away from the pattern of withdrawal, pulling back into your own head, so to speak, and just sitting, thinking, staring at the television. Do something.

HOST: Dr. Picou, do you have some feelings on – in particular – the community here at Prince William Sound, what people could do to involve themselves back in the community.

DR. PICOU: I think one of the strong points of the local culture in Prince William Sound communities is their consideration and willingness to help others. We talked about individual competitive types, but at the same time we certainly know that people in frontier communities are very helpful. They help one another. So, I guess the important point, not only underlying – underlining – the idea to get active, would be the point that you need to make yourself available to go out and help others. And, essentially, you may not be depressed. We know that technological disasters, in particular the data that we've looked at, two out of three people are not significantly

depressed in the Cordova and in other communities where data has been made available on the impacts of the Valdez spill. So, essentially, if you're not depressed you can go out and certainly help others and, and I think that's the key. That may be one of the important threads for responding, at least to having a positive collective response, to the impacts that relate to depression. Certainly, when you're aware of the fact that these technological catastrophes actually segment and fragment communities, then that at least is the first step toward understanding that others need help, and then, of course, once you start acting, then we have essentially reversed the process.

HOST: Dr. Arata, are there other suggestions for people trying to help themselves manage depression?

DR. ARATA: Definitely. One of the other things to be looking at, the kinds of thoughts you have. As Dr. Welsh said, one aspect of depression can be what we call some distortions in the way you think about things, being very down on yourself, down on the world, a tendency to think that nothing's ever going to get better. One thing that I find is that often people think that their thoughts are not something they can control. That's just the way they think. But reality is, it is something you can change. Part of changing it is really to become aware that you're making these kinds of statements, to catch yourself thinking these things. Often it's easier to hear it in other people than ourselves. You hear people saying things like things will never get better – you know – life is just never going to be the same. And while that may be the way you feel, what you've got to look at instead is say, well, things have changed, but what can I do to make things better. So, really trying to work on changing your thoughts to focus more on the positive. If you're sitting around feeling worthless and terrible and -- I've never done anything worthwhile in my life -- to look at that objectivity and say, well, what have I done? What are the things I've done with my life? How have I been self-reliant? What are the things that I have been able to accomplish, even despite the setbacks that the oil spill might have brought? So, working on recognizing negative thoughts and trying to change those thoughts.

HOST: Dr. Welsh.

DR. WELSH: Well, along a similar line as Dr. Arata, research has found that people who feel depressed are often oriented in time more toward the past. That they are looking at things that they've lost or things that they've given up, or bad things that have happened or bad things that they've done, and so they orient themselves towards the past to a great extent. So, right now, in the present, attempting to look more at the present and more toward the future, trying to catch myself if I think, well, oh boy, I used to be able to do this but I can't do that anymore. I used to be able to, you know, go fishing. Well, I can't do that anymore. Or, I used to be able to go, you know, do some other activity. Well, I can't do that anymore. As I focus in that way, what I wind up doing is making myself feel worse. As I can focus on, well, what can I do today? Can I go drive down the road here for a ways and look at the wildlife or look at the glaciers or whatever, as I can do things like that, I am more likely to be able to help myself and start to feel somewhat better.

HOST: Dr. Picou, is it that easy to just say I'm going to change my attitude, especially given the situation in Prince William Sound?

DR. PICOU: Certainly, not, and the important thing that we're trying to point out today in this program is essentially awareness, and then action through awareness is an important strategy to take. It's tough. Victims of all technological disasters have incredibly hard times. As we noted in some previous discussions, you're not alone. People should not feel that they are cut off from others, and I would think a concerted effort on the part of people to respond to others' needs and to help others is a first step. But, essentially, we know that depression is a very treatable phenomenon, and maybe Dr. Arata could comment on that?

DR. ARATA: Yes, one of the things, as you mentioned, this isn't as easy as it sounds if you're truly very depressed. Some people can change their thoughts and can get active, but for some people who are experiencing depression, it's going to take more than that, and for those people it may be important to seek out some kind of professional help. Some of the options include seeing a psychologist or a counselor of some type who will work with you in different types of therapy to help the person learn to change their thinking, to recognize it, and even just to talk about the problems they're having, that just talking with a professional in a confidential setting can be

different from talking to your friends about something. At the same time, there are medications available for treating depression. While many people aren't very comfortable with the idea of taking a medicine to affect the way they feel and behave, we don't really consider these drugs, as if in if you take them you're drug addict, but rather one of the things we know is that when people are depressed there are some changes that can occur in the chemistry of your brain. Sometimes you can make changes without taking medication, and a lot of times you can make changes without taking medication, but for some people they need that additional boost that the medicines can help to increase their energy to the level where they can do something. So, with the help of the medicine and sometimes therapy too, you can make the changes you need to deal with your depression.

HOST: Dr. Welsh, would you like to add anything concerning treatment options?

DR. WELSH: I'm going to disagree a little bit with my colleagues here about how long it takes to change. One can change one's mind in about a half a second, but it may take a long time to lead up to that half a second, and as people are working toward change, a lot of times it can feel very frustrating, that I don't feel that I'm making much progress. But at some point that change does take place, and when it does people can feel a real sense of relief and an optimism can sprout from that, that they can then go ahead and begin to get to feeling a lot better.

HOST: Well, Dr. Picou, would you wrap up today's topic for us and then set up the next program.

DR. PICOU: Today, we've actually only addressed one of the types of psychological impacts of technological disasters. The fact of the matter is that the research clearly shows that technological disasters cause multiple impacts at the individual level, and here we're saying that we isolated the response of depression in the program today. However, we know that depression is also correlated with substance abuse, alcohol abuse, anxiety, there's elements of post-traumatic stress disorder that are characteristic of long-term, chronic impacts of technological disasters. So, essentially, future programs will attempt to isolate some of these psychological impacts, discuss what they are and present some information on how individuals and communities can better cope and respond to these negative impacts.

HOST: And with those interesting comments, we will close today's program. I'm your host, Ray Farnell, inviting you to join us again for Growing Together, a community education program sponsored by Cordova's own Sound Alternatives and the Family Resource Center. This program was developed in cooperation with the University of South Alabama, funding provided by the Prince William Sound Regional Citizens' Advisory Council. If you have questions or comments regarding this program, please say tuned as most stations will carry a live call-in program dealing with technological disasters.

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A Community Education Program

Sponsored by Sound Alternatives and the Family Resource Center
Cordova, Alaska

Developed in conjunction with
The University of South Alabama

Funding provided by
The Prince William Sound Regional Citizens' Advisory Council

Program Four

Anxiety and Post-Traumatic Stress Disorder

PRESENT: RAY FARNELL, Host

DR. KATI ARATA, Assistant Professor of Psychology, University of South Alabama

DR. KENT WELSH, practicing psychologist, Mobile, Alabama

DR. J. STEVEN PICOU, Professor of Sociology, University of South Alabama

HOST: Today's program is the fourth in a series of five, 30-minute programs designed to provide information regarding technological disasters, their impacts, how we can better cope with such events, and what strategies communities can use to foster recovery. Today, we will focus on anxiety and post-traumatic stress disorder and how they impact victims of technological disasters. We will also address how people in affected communities can respond. To address this topic, we have with us two clinical psychologists: Dr. Kati Arata, Assistant Professor of Psychology at the University of South Alabama, and Dr. Kent Welsh, who has a practice in Mobile, Alabama. Also joining us is Dr. Steve Picou, Professor of Sociology at the University of South Alabama. Dr. Picou, give us an overview of our previous programs, and then tell us about today's focus.

DR. PICOU: The last program, we discussed technological disaster impacts, in particular the psychological impacts of these events. We focused on depression as an impact. We discussed some of the symptoms and characteristics of depression and provided some information as to how people can respond to this outcome of technological disasters. Today, we're going to focus on some additional psychological characteristics that result from technological disasters. As we noted in the last program, psychological impacts tend to cluster together. They're not single-type symptoms. In addition to depression which results from chronic stress, anxiety and post-traumatic stress disorder are two additional psychological impacts that we found for technological disasters, not only in Prince William Sound but in other communities, such as Love Canal, Three Mile Island, etcetera.

HOST: Dr. Arata, what is anxiety?

DR. ARATA: Anxiety is just worry, and as we talked about depression in the previous program, anxiety is also something that everybody does. Everybody worries from time to time, and that is not a problem. In fact, sometimes you ought to be worried about things, and so we'd be more worried if you weren't anxious and you weren't worried. The issue here is more when that worry or that anxiety, again, becomes all-consuming or begins to take over. We know that anxiety, just as a symptom, goes along with depression very often. That very often when people are depressed, they also worry a lot and are very anxious. But there are also a number of anxiety disorders where worrying is one of the main symptoms, but it causes a lot of other problems in the person's life.

HOST: Dr. Welsh.

DR. WELSH: Well, I'd like to make a distinction here between worry and concern. There are many things that go on in a person's life about which one would be appropriate to be concerned. What's my next paycheck going to be? You know, how am I going to deal with my boss on the next promotion, and so? There are things about which I can be concerned. Worry, on the other hand, tends to be more repetitive and more problematic. Worry, really, is the process of going over and over and over the same thing without really coming to much of a resolution, without really coming up with a possibility, without coming up with a way to solve the problem. So, the distinction here between worry and concern is that worry is non-productive, whereas concern can be productive.

HOST: Dr. Arata, do you agree with Dr. Welsh concern anxiety?

DR. ARATA: Definitely, and like we said, there probably are a lot of concerns that are realistic for people, following the oil spill. Some of those concerns were short term, but many of those have been long term. So for people to not be concerned would be surprising. Again, the problem is going to be for those people where that concern has gone out of control and turned into anxiety, where they have begun worrying about things that perhaps they don't need to worry about, or they have taken things that they have a problem with and they think about it a lot. They have trouble getting it out of their mind. They spend lots of time thinking about it over and over. And what we find is as people worry, one thing that can happen is in addition to just the discomfort of worrying, you also get a lot of physiological effects, that when you're worried about things your stomach knots up, your heart rate may increase, your blood pressure may increase. So, it really puts a stress on your body, and with that worry you can actually begin to develop physical problems that over time when you worry and worry and worry and you keep your body all revved up and worried all the time, you can begin to have physical complaints. Things like headaches, stomach aches, ulcers, and you can even exacerbate real physical problems

that you might already have or may not have. So you can – problems with heart disease, things such as that. We're not saying that worry causes heart disease, but if you worry a lot and you have that problem, those two things together don't make a good combination. So, the worry is bad on its own, but also can have some real physical effects on the person.

HOST: Dr. Picou, are there cases of anxiety in the Prince William Sound area?

DR. PICO: Well, certainly, we know that technological disasters, and in particular the *Exxon Valdez* oil spill, generates a lot of uncertainty. Uncertainties regarding the nature and extent of contamination, what will be the long-term consequences, and these uncertainties are not necessarily, let us say, put to rest by experts and authorities. What we find in technological disasters is that the experts disagree. Some people say that was not enough radiation to hurt anyone; whereas, other experts say it was a significant amount and could be damaging. Some people say that the release of hydrocarbons into Prince William Sound did not significantly affect the ecosystem; others say it severely damaged the ecosystem. Regardless of what may be the accuracy of either of the two points, the uncertainty generated by the lack of a consensual agreement as to what happened certainly causes people to worry.

HOST: Dr. Arata, would it be correct to say that anxiety in itself is not bad.

DR. ARATA: Well, I think, as Dr. Welsh said, it's really the differentiating between anxiety and concern. That there may be some real reasons to be concerned about things, such as the atmosphere, but to the degree that it begins to consume you, consume your thoughts and even interfere with your physical functioning and your psychological functioning, then it's turned into anxiety when it begins to control your life.

HOST: Dr. Welsh.

DR. WELSH: There's another face of anxiety here that I want to bring up, and that's the component of fear. Fear is – can be all-consuming to people and can be very unsettling and disruptive to a person's life, and oftentimes people will fear things over which they feel they have no control, and not knowing what's going to happen and not knowing if I can control it will lead to a higher degree of fear, will lead to a higher degree of anxiety. If I can tell a story here for a moment: Two hikers were walking through the woods and come to a clearing, and as they come in on one side of the clearing, a bear comes in on the other side. And one fellow drops to his knees, takes off his backpack and starts pulling out a pair of running shoes and putting them on. The other guy says, what are doing? You can't outrun that bear. The second guy says, I don't have to outrun the bear. I just have to outrun you. So, while the bear was something about which both of them could be afraid, the fellow with the running shoes had something he could do to cope with the fear, so that he wasn't experiencing as great a stress or wasn't experiencing as great an anxiety in that situation as the other guy who was going to be bear food.

HOST: Dr. Arata, let's focus now on post-traumatic stress disorder.

DR. ARATA: Post-traumatic stress disorder is a concept which kind of grew out of the Vietnam War. We found that a lot of the veterans coming back had problems with flashbacks, had problems – they'd be consumed with thinking about the things that had happened to them, and identified a characteristic pattern of symptoms which seems to be experienced by people following traumatic events. In particular, when you look at natural disasters, you find problems with post-traumatic stress disorder. One of the things that we expect is that when people are in situations where their life is being threatened, that very often they may develop symptoms of post-traumatic stress disorder. It's a little more difficult when we look technological disasters to know what to think about PTSD. While people's direct life may not have been threatened, they have experienced a traumatic event, and many, many people will experience a traumatic reaction that is very much like post-traumatic stress disorder. And so, while they may not actually have the disorder, they may have many of the symptoms. In particular, the kinds of things you see with PTSD is kind of a vacillation that people kind of alternate between, what we call avoidance symptoms and intrusion symptoms. The intrusion symptoms are things where they can't stop thinking about what's happened, kind of about anxiety or worry that we talked about. They worry about the event, they think about it, things remind them of it. Maybe they drive by an Exxon gas station and find

themselves getting very angry and upset and having a real reaction to anything that reminds them of the oil spill. Well, what will often happen is that this intrusion is so upsetting that then they say, okay, I'm not going to think about it. I'm going to pretend like it never happened. I'm going to stick my head in the sand. And we call that avoidance. That's not dealing with it. That's just saying, okay, I'm not going to think about. And what seems to happen when people have these symptoms of PTSD is they kind of go back and forth. The more you try not to think about it, the harder it is not to think about it. So, you have these periods where it's consuming your mind and you can't stop thinking about, and so instead you decide I'm going to avoid it. I'm not going to turn on the television, I don't want to be around my friends because they all sit around and talk about it, and so we try to avoid it, and the more you avoid it, the more it comes back.

HOST: Dr. Welsh.

DR. WELSH: Well, to kind of clarify a little bit about PTSD, as Dr. Arata mentioned, we usually think of it in terms of situations where someone has experienced a personal threat to their life, and one of the ideas about why that happens is that we have sort of a belief, humans have sort of a belief in ourselves, that we're going to continue to exist, that our lives are going to continue along for the next several minutes, that we're not going to cease to exist, so to speak. In a technological disaster like this, it's not our personal life that's being threatened, but our lifestyle that is threatened, and it's a change. We've talked about change here before, and this represents a dramatic change in our lifestyle that then from which we develop these symptoms that Dr. Arata described.

HOST: Dr. Picou, let's talk about post-traumatic stress disorder in light of a technological disaster.

DR. PICOU: We're dealing with a post phenomenon – and that means something has occurred and it gives the impression that it's over. But, again, we're dealing with technological disasters, and this is something new and different and something that we know relatively little about. The key point here is that the post is post what? Is it post-oil? Is it post-litigation? Is it post continued litigation and no resolution of jury's decision? Is it post I-had-to-sell-my-boat? Is it post – you know, we could go and on. What we're dealing with with technological disasters then are situations that generate a continuing post response, and the chronic nature of these events points to the importance of understanding traditional conceptions and treatments of PTSD to the somewhat new and different flavor, so to speak. New, in the sense that the post continues. The ability to recognize this pattern, I think, is a very important first step to responding to a continuing post-reaction to a series of negative events.

HOST: What are some of the signs of post-traumatic stress disorder? Dr. Arata.

DR. ARATA: Well, some of the signs we're going to look at are just signs that the anxiety is really consuming your life. Particularly with post-traumatic stress disorder, which you may find is what we call intrusive thoughts, that what happens is you find that your thoughts come into your head when you don't want them to, that bother you, worrying about things related, in this case perhaps, to the oil spill, that lots of things remind you of it, but not only that they remind you of the event, but that when you're reminded it's upsetting for you. Because we're all reminded all the time about different things, but it doesn't always make us as upset as if it were happening again. With anxiety, you get a lot of the same types of problems as you do with depression. You find yourself having difficulty sleeping. We've probably all had a restless night and laid there in bed and thought about everything you had to do the next day. Well, that's normal to happen occasionally. For the person who has developed a chronic pattern of worry, it may become an every night thing. Again, what happens with that, you also are going find that you may have problems concentrating. You can't focus your attention to work because too many things are running through your head. You may have problems with being constantly on edge that kind of have yourself in a heightened state of arousal so you may be more irritable, more angry. And, then, again, with that heightened arousal, you may find yourself feeling tense all the time. Your shoulders hurt, your neck hurts, you feel tired all the time. If you've ever had a time when you've been worried for a long time about something, maybe you had a relative in hospital and you had to do the vigil in the waiting room, it's exhausting to worry all day long, and for the person who is chronically worrying, they're exhausting themselves.

HOST: Dr. Welsh.

DR. WELSH: Well, one of the things that happens with people sometimes is they, as Dr. Arata mentioned, is that they get into this state of hyper-arousal, that their bodies are all pumped up and keyed up, there's a little more adrenaline flowing through their system than normal, and for some individuals when this type of thing occurs they begin to have something that triggers a large response in their bodies, and their heart just feels like it's going to race out of their chest – that it's just thumping away at an unbelievable rate to their experience. They may have trouble breathing, they may feel like they're just going to explode, and this is an overpowering feeling of fear that these people experience, and it's extremely scary to the people. They really think they're going to die, or some think that something really bad is going to happen to them. They don't die. People don't really die from this kind of disorder. But it's called a panic disorder. And it can happen in a variety of ways for people, and people can experience it in little bit different ways. One way is that people can experience this is maybe they're walking to the grocery store and they have one of these attacks for no apparent reason. They can't identify – you know, well, I know I'm not afraid of cornflakes, why am I suddenly having this attack? So, they don't know why it's happens, but it happens all of a sudden. So, they race out of the store, get in their car, and start to go home, and, wow, boy, that – I better get out of here, I need to really get away from this place because I'm so scared. Well, it will go away. It passes – naturally. They may not experience that for awhile. Then some other day they may be driving along the street, the same thing happened again. Just, boom. All of a sudden, out of the blue they get extremely scared, extremely agitated. Like I say, they're heart is racing along, and they begin again to think, boy, I'd better go home. I'd better get on home before something really bad happens to me. Well, again, this will pass. It goes away. But, gradually, as the person has a few of these episodes like this and they begin to process the thought -- I'd better get home because if this happens to me while I'm away from, you know, I don't know what I'll do, but I need to get home – well, an interesting thing begins to happen to those people, they begin to stop leaving home. They begin to stay within their houses and they develop another kind of disorder called agoraphobia, and that's one way that people can develop that disorder is through having panic attacks and sort of withdrawing into their houses so that they think that they're protecting themselves. In reality, they can get over these panic attacks. These are not something that they have to continue to suffer from. These are tremendously scary episodes, but they are things that people can get over. And sometimes, when you have incidents such as technological disaster like this, that gets people keyed up anyway, a few people will begin to develop these panic attacks, and it can be very, very scary and very uncomfortable for them, and one of the things I want to emphasize is that people can get over them.

HOST: How does the post-traumatic stress disorder affect people impacted by a technological disaster, such as those in the Prince William Sound community? Dr. Picou.

DR. PICOU: We certainly know that there are a lot of people who have worried a long time in these communities, and there are a lot of people who have been unable to resolve many of the painful feelings that they've had to deal with over the last seven years now. Now, given that, we have data that tends to indicate that people do have intrusive recollections and do try to avoid reminders of the spill, and at the same time they may have trouble sleeping and they do respond angrily to reminders of it. Certainly, in order to make detailed clinical diagnosis you would have to have an army of researchers for any technological disaster, but we certainly have indications that there's a strong possibility that a significant minority is experiencing many of these same symptoms. I would add that an important characteristic of such symptoms reacting, you know, to an event in this manner, is that there are side effects that are correlated. For example, abusing alcohol or abusing other drugs, or even abusing those people that are very close to you is another very real possibility. But the communities impacted negatively by the *Exxon Valdez* oil spill certainly are characterized by uncertainty, worry, and collective stress.

HOST: Let's take a look at suggestions for managing this illness and treatment options. Dr. Arata.

DR. ARATA: Well, one of the things -- as far as the symptoms of PTSD -- one of the things we know from research with people who do have PTSD is that avoidance can be a real part of the problem. It turns out that if you're symptoms are like that, where you're having problems with the intrusive thoughts and the avoidance, that one of the best things for people to do is to talk about the things that are bothering them. That in our experience with the Vietnam vets, it turned out that support groups were very beneficial for them, when they were

able to talk about the events that were bothering them in a supportive setting. The real hard part here is to differentiate between talking about things and venting about things and getting yourself upset. That it's important that that talking be in a way that helps to resolve the feelings, but more importantly here is the issue of dealing with the problem versus trying to stick your head in the sand and avoid the things that remind you of it. The more we avoid something, the more it bothers you, and so facing your fears seems to be one of the solutions for any kind of anxiety that's related to some particular thought or object.

HOST: What about people that find it hard to share their feelings with others? Some people would rather try to heal themselves.

DR. ARATA: That's definitely understandable. The problem here is that while that may have worked for them in the past, if they're having these types of problems it may show that it's not working for them. There are some things you can do on your own though. While talking about things seems to help, we also know that writing about things can help for people. That writing down your thoughts and feelings can be beneficial. Again, going back to the research on Vietnam vets, when you're dealing with a specific event it even works to talk about it into a tape recorder and listen to it over and over. While that may not really be applicable here, the point is that there is a difference, even if you're alone in the room, between thinking about something in your head and writing it down or talking about it out loud. So, it doesn't have to be a group of people. It can just be yourself that you're talking to.

HOST: Dr. Welsh.

DR. WELSH: The suggestions that Dr. Arata made are excellent ones, and those are ones that people can do either as individuals or collectively in groups. Another thing that people can do individually is to work directly on some of the symptoms of anxiety by learning to relax and learning to get the tension out of their bodies. What we typically do as we start to feel tense, we get used to having a particular level of tension in our bodies and then we tense up even more, and our bodies get used to that. Then we tense up even more and our bodies get used to that. So, it sort of builds over a period of time. But, as I intentionally begin to relax, as I intentionally set about to let the tension out, that can go a long ways toward helping relieve symptoms of anxiety. Sometimes things like massage or a warm bath, just sitting down listening to some soothing music – you don't have to have, you know, some mystical meditative – meditational process to go through. You can just do it by sitting in a warm bath, but learning to relax is a really important thing to be able to learn to deal with some of these anxiety symptoms.

HOST: Dr. Picou.

DR. PICOU: Well, you can certainly make a list of things you like about yourself. It's been my experience in the last seven years in this community that the residents are the warmest, friendliest, most helping individuals I've ever had the pleasure to meet in my lifetime. So, essentially, sometimes this goes, let us say, not said and maybe overlooked by the local residents themselves. Certainly, think about and enjoy your positive assets and accomplishments. So, that would be one thing that I would add as important. And for those of us who have the opportunity to enjoy the beautiful scenery around the community, pamper yourself. I mean, a drive down the road can be invigorating, can be fun with the family, having picnics, trying to take advantage of things. Certainly, doing things in family groups would be very helpful, and I know that in this community there are many, many strong families and there are strong family ties. So, these are kind of positive things that already exist that people in the community can build on.

HOST: Dr. Arata.

DR. ARATA: I think maybe a final thing would have to do with dealing again with the thoughts as we talked about with depression. That obviously with anxiety and worry, a big part of it is your thoughts. That your thoughts are making you worry about things, and particularly, as Dr. Welsh talked about, when you're contrasting anxiety versus concerns. Concerns is when you have a problem and you can take an approach to dealing with it. Anxiety and worry are when you're obsessing over things and thinking about the worst possible thing that can

happen. One of the things people can do to deal with that is to work on noticing these thoughts in their head and in some ways talking yourself out of it, talking to yourself about, well, is it really that terrible. You know, I feel like financially everything is horrible and just sitting there and worrying about it, but rather, stopping yourself and saying, okay, slow down, calm down, what's the real problem? What can I do about it? And when you catch yourself having irrational worries or worrying about things excessively, stopping yourself. You know, if you are having financial problems, of course, that's a concern, but worrying about it all day long isn't putting money in the bank. And so when you catch yourself with those kinds of thoughts, working on stopping those thoughts, distracting yourself, either doing something that will work towards solving the problem or putting the thought away until you can do something about it.

HOST: Dr. Welsh, does it help people to get involved with a church group or other community organization?

DR. WELSH: Yeah, I think anything like that than an individual can do to re-identify with an ongoing group, such as church group or a civic group or any place where I can reconnect with people, is going to really important at this time.

HOST: Well, Dr. Picou, would you wrap up today's topic for us and then set up the next program.

DR. PICOU: Today, we discussed some of the long-term impacts of technological disasters, particularly anxiety and post-traumatic stress disorder. Certainly, in the previous program when we discussed depression, we want people to think about these things as kind of clustering together. The next program we will look a little more at behavioral changes, specifically alcohol abuse, substance abuse and the expression of anger in chronic, stressful situations. Certainly, technological disasters can be summed up as a chronic, stressful situation.

HOST: And with those interesting comments, we will close today's program. I'm your host, Ray Farnell, inviting you to join us again for Growing Together, a community education program sponsored by Cordova's own Sound Alternatives and the Family Resource Center. This program was developed in cooperation with the University of South Alabama, funding provided by the Prince William Sound Regional Citizens' Advisory Council. If you have questions or comments regarding this program, please say tuned as most stations will carry a live call-in program dealing with technological disasters.

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The Prince William Sound Regional Citizens' Advisory Council

Program Five

Substance Abuse and Anger

PRESENT: RAY FARNELL, Host

DR. KATI ARATA, Assistant Professor of Psychology, University of South Alabama

DR. KENT WELSH, practicing psychologist, Mobile, Alabama

DR. J. STEVEN PICOU, Professor of Sociology, University of South Alabama

HOST: Today's program is the final installment in a series of programs designed to provide information regarding technological disasters, their impacts, how we can better cope with such events, and what strategies communities can use to foster recovery. Today, we will focus on substance abuse and anger and how they impact victims of technological disasters. We will also address how people in affected communities can respond. To address this topic, we have with us today two clinical psychologists: Dr. Kati Arata, Assistant Professor of Psychology at the University of South Alabama, and Dr. Kent Welsh, who has a practice in Mobile, Alabama. Also joining us is Dr. Steve Picou, Professor of Sociology at the University of South Alabama.

Dr. Picou, give us an overview of our previous programs, and then tell us about today's focus.

DR. PICOU: The last program, we essentially discussed several individual reactions to technological disasters. The two reactions that we focused on in the last program was anxiety and post traumatic stress disorder. So far, we've only considered what we might call mental or cognitive reactions. In today's program, we're going to briefly address some behaviors that reflect long-term negative impact from technological disasters. Now, once again, these behaviors may be in a society – in a community – not impacted by a technological disaster, but nonetheless the behaviors we're going to talk about today become a little excessive in these long-term stressful situations.

HOST: Dr. Arata.

DR. ARATA: Well, as Dr. Picou said, substance abuse is certainly a problem that affects a lot of communities and it's a big problem in society today. One of the things we know about substance abuse, particularly alcohol since that's usually the most commonly abused substance, is that stress can often lead to an increased use – that many people deal with stress by having a drink, and on an occasional basis that may not be a problem, but what we do know is that alcohol abuse is a major problem in our country. As many as one out of ten people may abuse alcohol in one year, and we know that alcohol abuse is the leading cause of physical problems that result in hospitalization. It's also a factor in many crimes that are committed. That very often when people are under the influence of substances such as alcohol, they may be more likely to become aggressive or violent. At the same time, alcohol can be a factor in increasing other types of symptoms, such as the ones we've talked about, such as depression and anxiety. They all kind of work together. That people who are depressed or anxious may choose alcohol or some other substance to help them deal with that problem. It's sort of an avoidance. It makes you forget about it. But then the substance you use may actually increase those symptoms, so you get into a circle where you're making yourself feel worse and worse. The worse you feel, the more you want to avoid it and not think about it. The more you avoid it and not think about, the worse you feel.

HOST: Dr. Welsh.

DR. WELSH: Well, I think there are a couple of ways that people use alcohol in particular. A lot of times folks who are experiencing stress, depression, and so on, will use alcohol as a medicine, and cultures have been doing that kind of thing for a long, long time, and, as with any kind of medicine if you take the right amount, you do okay. If you take too much medicine, then you can have problems with that. It can lead to difficulties with things that are going on with you. So, I think that that may be one of the areas where people are experiencing difficulties, where they use the alcohol or the substance as a medicine, but then they more or less overdose themselves on it and wind up then having behavioral problems as a result.

HOST: Dr. Picou, let's talk about substance abuse in light of a technological disaster.

DR. PICOU: What we're focusing on here is the reaction -- and oftentimes these reactions are very normal – reactions of individuals to exceedingly stressful situations that persist for a very long period of time. Now, given this situation, we find that people will oftentimes try to numb their problems, and certainly an overuse of alcohol seems to be a strategy for many in trying to reach this sense of being numb. But, I think that the important point that we have to understand here, it's not just the pattern of drinking that we're talking about or substance abuse that we're talking about, but it's actually the word abuse that needs to be focused on. When a situation arises that's stressful, people abuse alcohol, particularly isolating themselves and abusing alcohol. We're creating the situation where they're dysfunctional, and we know from past studies of technological

disasters that we need to try to break the pattern in corrosive community. Certainly, we've discussed in this series of programs social isolation, we've discussed depression, we've discussed anxiety and worry, and we've discussed a variety of post-traumatic stress responses. As we mentioned before, alcohol abuse and other substance abuse clusters in our behaviors that are associated with these very normal responses to extremely traumatic events.

HOST: Dr. Arata, how can you tell if you're a substance abuser?

DR. ARATA: Well, one of the things you want to look at is whether or not you have a kind of a pattern of increased use. Is it something that's becoming an every day thing for you, and maybe not only an every day thing, but that you're using the substance in very large amounts every day? Some of the signs that it's becoming too much may be when you begin to hide it from people. You kind of recognize that maybe you don't want everybody to know how much you're drinking, so you don't really tell them how much you've had. You might find yourself using the substance throughout the day, where before you might have a drink in the evening. Now it seems like lunch is a good time to start, or even in the morning to kind of get you going. A real concern is when you're using a substance in a situation that can be dangerous. When you're driving or if you're working in a situation where you're operating heavy machinery or something, it can be very dangerous to be using some kinds of substances, and at the same time when your substance use begins to interfere with your work and your social life.

HOST: Dr. Welsh.

DR. WELSH: When it starts to get you in trouble, that's when it's becoming abusive. Now, that may mean that it's just a couple of beers or it may mean a couple of six packs, but when it gets me in trouble, that's when it's an abusive intake.

HOST: What are the physical signs of a substance abuser? Dr. Arata.

DR. ARATA: Well, certainly, with alcohol, for a very heavy user, there can be some real physical signs. Many people have had a hangover before and would kind of realize that a hangover is actually an alcohol withdrawal syndrome. For someone who is drinking very heavily, when they stop drinking they may have actual signs of withdrawal that are more extreme. They may find that in the mornings when they wake up, their hands are shaking and they really can't get going until they have some alcohol. Again, increased depression and anxiety can also be a consequence of heavy substance use, kind of a withdrawal syndrome that you go through. And, again, as with the hangover many people may have had, the thing that makes you feel better is to have some more of it. But you're just exacerbating the problem.

HOST: Dr. Welsh.

DR. WELSH: Well, again, some of the physical indicators, as Dr. Arata mentioned, can be tremor, shakiness, feeling depressed, as she indicated. All of those are physical and sort of psychological indicators that the substance is taking more control of me than I am of controlling it.

HOST: Let's talk about treatment options for substance abuse. Dr. Arata.

DR. ARATA: Well, I think with substance abuse, like many problems we've talked about, for many people they're able to stop it on their own. But not always. But the first thing, of course, is recognizing the problem, and if you can recognize the problem in yourself, that's certainly a very big, positive step, if you can see that it's your own problem and kind of accepting that. A real common approach is to join a support group. Most people have heard of Alcoholics Anonymous, and these are self-help groups which are designed to kind of help the person in stopping. Probably a big part of stopping would be to replace drinking or whatever the substance is with other activities, to find other ways of releasing stress, to find other ways of socializing with people, rather than using the substance. A real problem can be avoiding situations where the main focus is on drinking or substance use. It's very hard if you're a bartender to not – well, maybe not a bartender, but if you work in a bar or

hang out in bar, not to have a drink. So it may be a matter of putting yourself in other types of situations where the main focus isn't alcohol.

HOST: Dr. Welsh.

DR. WELSH: I guess I want to come back to the idea of staying out of trouble. That if I am going to have something to drink, that's okay, but I need to be aware that there are consequences to my drinking, and that when I drink to the extent that I start to get myself in trouble, then I need to start cutting back on that. I'm not saying necessarily that what I have to shoot for is abstinence, but I need to cut back to the point that I'm not getting myself in trouble any more, and I think that's an important thing for folks to realize.

HOST: Well, so far in this program, we've dealt with substance abuse and how it impacts victims of technological disasters. Let's focus now on anger. Dr. Picou, is there a lot of anger among members of communities where technological disasters have occurred?

DR. PICOU: Oh, definitely. In fact, what we know from twenty years of studying these events is that when things don't seem to work out or make sense, people become frustrated. A very normal and healthy emotional response is anger. You know, some people will yell and swear. Others may suppress their anger, may try to make out it's not there. Others may have a very compulsive, constant concern about something, and an event totally unrelated to the source of the anger may elicit a tremendous angry response on the part of an individual. Technological disasters make people mad. They shouldn't have happened. It was someone else's responsibility. I put my trust into that someone else, and look where it got me. You're darn right I'm mad. A very, very important component of the technological disaster pattern we've repeated over and over is the chronic nature of the pattern. If a person stays angry for seven years, I would submit that their physical well-being, the well-being of their family and their own emotional well-being would be totally shot. It's just very hard to do. Even though the anger is justified, and even though one has a right to be angry, we must become aware of the fact that persistent anger can only change the self and hurt others around us.

HOST: Dr. Arata, what are some signs of anger?

DR. ARATA: Well, I think the thing is anger is, as you say, is really a natural emotion, and there's really nothing wrong with being angry. Many situations are going to make you feel angry. The real issue is going to be how you deal with your anger. There's healthy ways to deal with anger and there's unhealthy ways to deal with it, and obviously it's going to be the more unhealthy ones we're going to be looking at – constantly blowing up, becoming physically aggressive. Again, anger may even feed into the substance abuse, and substance abuse will feed into anger. As people are using these kinds of ways of dealing with anger, one thing we often see is that often people will displace their anger. We all start off angry with a common enemy, but then you wind up you can't do anything about that, and so you displace that anger on the people around you. You know, kind of the old -- you're angry at your boss, you come home and you get angry at your wife, you get angry at your kids. They're people you can be angry at. There's something you can do about that. There's nothing you can do, perhaps, about changes in the environment. So, what happens is we take the anger out on other people and we may take that anger out in bad ways.

HOST: Do you find that community members have sometimes been angry for so long that they might even forget why they're angry, but because the anger has been such a part of their environment, they tend to feed on the anger.

DR. ARATA: I think the part – feeding on it is certainly part of it. You know, if somebody is angry at me, I may not have been angry at them, but now that they're angry at me, well, now I'm angry at you, and we start doing things to each other to make that anger increase. That's happens in relationships, it happens with neighbors, it happens at jobs. As people get angry, they say things that are hurtful, they yell, they scream, and the natural response is to yell and scream back.

HOST: So, it's like that cycle you talked about earlier.

DR. ARATA: And then by the time it's all done, people do have reasons to be angry at each other, because of the things that have resulted from that original misplaced anger.

HOST: Dr. Welsh.

DR. WELSH: I'd like to distinguish here between anger and aggression. Anger is the emotional that we've been talking about here, and that's the natural feeling that people have when they experience frustration, when they experience certain kinds of threats. Aggression, on the other hand, is a behavior, and that's the fighting, that's the yelling, the screaming, the punching, the whatever – okay. So, one of the ways of more appropriately handling things is to understand the target of my anger. That if I'm angry because the environment is messed up, well, at whom am I angry? Am I angry at my wife about that? Am I angry at my kids about that? No, I'm not angry at them about that, they didn't do that. I'm angry over here at something else. That's where the anger is more appropriately directly. Aggression, on the other hand, is not appropriate toward my spouse, toward my kids, toward my neighbor, toward whatever. So, being able to make that distinction and focus my anger in the appropriate direction, I think is an important point here.

HOST: Dr. Arata, touch on some of the consequences of anger.

DR. ARATA: Well, I think, as we talked about with substance abuse, the problem you're looking at here is when it begins to get you in trouble. Particularly with aggression, what's happening is you're expressing that anger outwardly. You may be hurting people. Clearly, when you begin to hurt people, there can be real consequences to that behavior. While they may not always be legal consequences, there are certain consequences in your relationships, occupational consequences, and even physical consequences. We know, going back to the heart disease again and other stress-related illnesses, anger seems to be a big part of what kind of increases heart disease. The personality profile that goes along with it that staying angry and constantly being angry has physical effects on your body, much like other kinds of stress.

HOST: Dr. Welsh.

DR. WELSH: Yes, the idea of being able to, as I said earlier, focus your anger on – in a more appropriate way – on the appropriate target and displace aggression or reduce the level of aggression that we exhibit toward other people, because all that does is interfere with relationships and so on.

HOST: Yes. Dr. Picou.

DR. PICOU: What I'd like to comment on would be the synergistic effect of many of the things that we've discussed over the last four days. In particular, anger combined with alcohol, combined with depression and linked to persistent worry and fears, certainly is going to have a debilitating effect on the individual, the individual this person interacts with, as well as the immediate family and friends. So, being aware that technological disasters generate these clusters of symptoms, and then once these symptoms interact, so to speak, together, they can really become out of control and a serious problem for individuals, families, and certainly communities. I think that we need to think very carefully about managing and responding to these symptoms. We certainly haven't covered them all in this series. There are others. But the patterns that we've discussed are very real, we know that they've existed for other technological disasters, and that characteristically the *Exxon Valdez* oil spill also had similarly negative impacts on many communities and individuals in these communities. I think people need to respond individually and collectively, and certainly with regard to handling anger, if we look at situations differently, if we force ourselves to try to stop and think, what am I angry about, and what's a positive response and expression from this anger, we'd be better off. Certainly, express how you feel and why. That's important. And I would think the general notion – calm down – and to try to not lose control and to try to do things that you've done before that can have positive consequences.

HOST: Dr. Arata, would you care to add to those suggestions?

DR. ARATA: I think those are all good suggestions, particularly the idea of calming down. One thing with small children, we often make them take a timeout, but as adults we don't always do that ourselves, and for many people it can be important to not face something right when it happens. When you're really angry, you need to take a timeout. What's real important here though, is that it not be a complete timeout. One pattern you see is that some people tend to hold everything in until they blow up, and so if you don't go back to the problem after you've taken your timeout, it may just be staying inside of you and festering. So, it's important for people to talk about the things that are making them angry, but to talk about it when they're calm, and, as he said, to look for something positive that you might be able to do to help deal with your anger.

HOST: Dr. Welsh, what about getting involved with local agencies or community groups to help manage anger?

DR. WELSH: I think that can be helpful, for people to have an opportunity to ventilate their feelings in an appropriate forum and being able to express the things that are going on inside of them in a way that they can kind of release some of those feelings of anger. Just release, however, isn't sufficient. It also is important for the person to feel a sense of resolution or that something is happening, some closure is occurring. Now, it's not necessarily that there's closure occurring on whatever the event was, but closure occurring on my feelings. To reiterate something that both Dr. Picou and Dr. Arata mentioned, and that's delay – waiting, holding off and not exploding immediately. And a comment that was attributed to Mark Twain, he apparently some time or another said if you get angry, count to ten, and if you're still angry, count to a hundred, and if you're still angry, cuss.

HOST: Dr. Picou.

DR. PICOU: You must remember that if you're feeling angry or depressed or any of the symptoms that we've discussed in this series, others probably are having the same feelings too. Certainly, it's important for people to try to help others. Talk and listen and maybe other people can be a source of support and benefit to you also. Also remember that venting can be very problematic, in the sense that you may say things in the heat of your anger or emotion that may hurt other people around you. So, I would say sensitive to giving voice to how you feel in a manner that is sensitive to others would also be important. Also, in order to respond to technological disasters, I think communities have to make a collective effort to become aware and then respond to this problem. There are local people in all communities who are very interested in others. The mental health professional community in Cordova, the people who work at Sound Alternatives, the Family Resource Center, local clergy, other natural healers and providers are there. It may be a very wise and strategic plan if one feels they may be abusing alcohol, angry too long, suffering from problems and emotional responses that may be getting a little out of hand, that they seek out these people and talk to them. It certainly would be of benefit to someone who is experiencing these symptoms to have others respond to them and have them be able to respond to others.

HOST: Dr. Arata.

DR. ARATA: Another important thing that people can do to help themselves is to read books. There's lots of excellent resources now available on all of these things we've talked about. Books that deal with dealing with anger, books on dealing with depression and anxiety, and all of these books will cover many of the things that we've talked about and often give little strategies people can use to try to work on changing their feelings.

HOST: Dr. Picou.

DR. PICOU: If anyone is interested in securing a bibliography of references that reflect the topics that were discussed in this series, they are available from Sound Alternatives. Simply give them a call and – or drop them a line – and make a request, and we'll see that the references and bibliography is sent to you.

HOST: Any closing remarks from either Dr. Welsh or Dr. Arata?

DR. ARATA: Well, I think maybe the thing to add to all this is that, while there may be some aspects to what's happened that you can't change, what you need to focus on is on the things that you can change. Work on changing those feelings that are unpleasant and changing behaviors that are causing you problems.

HOST: Dr. Welsh.

DR. WELSH: When it seems like I have no control over anything else in my life, the one thing over which I do have some degree of control is that which goes on from my skin in. I may not control anything from my skin out, but from my skin in, I potentially have control over that, and that includes my feelings and my thoughts.

HOST: And, finally, Dr. Picou.

DR. PICOU: The first step in understanding that you have a problem to do something about is becoming aware of that problem. This series of programs has attempted, in a very brief and general way, to look at technological disasters, their impacts and how people and communities can respond to them. We focused on the *Exxon Valdez* oil spill as a source of collective stress and trauma for people in communities in Prince William Sound, but the issue really is bigger than any one technological accident. The issue is that technological disasters are a phenomenon of our new century, they're a phenomenon of the future. We need to have a good understanding, an educated understanding of these events. We need to know what happens to people, and then we need to attempt to respond to it in a positive manner. And I think and hope that the information and the people that have participated in this program will be of benefit to the listeners.

HOST: And with those interesting comments, we will close this program and end this series. I'm your host, Ray Farnell. Thanks for joining us for Growing Together, a community education program sponsored by Cordova's own Sound Alternatives and the Family Resource Center. This program was developed in cooperation with the University of South Alabama, funding provided by the Prince William Sound Regional Citizens' Advisory Council. If you have questions or comments regarding this program, please say tuned as most stations will carry a live call-in program dealing with technological disasters.

Appendix D

Outreach Activity: In-Service Training for Professionals

Introduction

To insure that local community professionals are involved following a technological disaster, in-service training modules for teachers, law enforcement, and the clergy were developed. These modules were designed to address special issues and community problems. Because teachers, police, sheriffs' officers, and clergy are in constant contact with members of the community, they must be trained to recognize, counsel and refer individuals with special needs.

The in-service training programs were developed to emphasize problems of children for teachers, domestic disturbances and substance abuse for law enforcement, and stress coping strategies for families. The following are suggestions for organizing and administering the in-service programs:

- Select a qualified mental health professional from the community or from outside the community to administer each in-service training program. The professional should be given the in-service training materials to review and tailor for the impacted community. If the session guidelines provided are followed, each program will require a two (2) hour training block for delivery.
- Make initial contact with the school superintendent, Chief of Police or Sheriff, and local church associations to arrange the time and place for training to be accomplished. In some communities the Mayor may be the best initial contact to influence law enforcement participation. Delivery of in-service programs should be accomplished within facilities convenient to each group of professionals (schools, police department briefing room, and church halls).
- Secure additional materials in the form of professional handouts, videos, and terminology sheets to augment training materials. See the appendix reference directory for possible sources of supplemental materials.
- Develop a feedback in the form of a program evaluation for all in-service training participants to determine strengths and weaknesses of training. There should also be a section within the evaluation to request suggestions for program improvement.

You will find the following in service training guides in this appendix:

- “Clergy/Mental Health In-Service Training”
- “Law Enforcement In-Service Training”
- “School Personnel In-Service Training”

GROWING TOGETHER

CLERGY/MENTAL HEALTH

IN-SERVICE TRAINING

Dr. Kati Arata
Dr. Steven Picou

**GROWING TOGETHER
CLERGY/MENTAL HEALTH
IN-SERVICE TRAINING**

- I. Overview of Disaster Research (45 min.)
 - A. Technological Disasters
 - B. Psychological and Social Effects
 - C. EVOS Effects (1989-1995 data)
- II. Growing Together Program (15 min.)
- III. Common Community/Individual Problems (45 min.)
 - A. PTSD
 - B. Depression
 - C. Anxiety Disorders
 - D. Substance Abuse
 - E. Anger Management
 - F. Family Problems
- IV. Agency Interventions (15 min.)
 - A. Crisis Intervention
 - B. Peer Listener Network
 - C. Disaster Preparedness
- V. Questions/Discussion

DISASTER RESEARCH

Original Studies

Coconut Grove nightclub fire in Boston (1944)

- Lindeman describes emotional reactions and a "disaster syndrome" consisting of flashbacks, survivor guilt, anger & hostility, a compulsive need to talk about the trauma, and obsessive thoughts and compulsive behaviors

Buffalo Creek Flood (1972)

- 4000 of the communities' 5000 houses were destroyed
- people relocated to trailers, lost support systems
- 90% had lasting psychological symptoms two years after the flood

Mount St. Helens (1980)

- tenfold increase in depression, anxiety, and PTSD symptoms long-term

Three Mile Island (1979)

- even though no actual harm to individuals, significant, long-term increase in rates of depression, anxiety, hostility, and somatization

No Long Term Effects?

- a number of researchers have suggested that disasters typically produce only transitory effects and few will develop ongoing psychological problems as a result of a single disaster, however, as the above studies demonstrate, long-term effects are found

Types of Disasters

Natural Disasters

- floods, earthquakes, hurricanes
- may involve some warning time
- "low point" during worst part of disaster
- loss of life and property
- blame extends from God to man; often most anger associated with recovery and agencies involved
- research demonstrates usual positive community response in the aftermath with community bonding in efforts to rebuild
- primarily short-term psychological effects

"Human-caused" Disasters

Examples: Chernobyl, Exxon Valdez Oil Spill

- rarely a "low point"
- degree of victimization and harm hard to perceive
- suffering often not acknowledged
- long-term effects more common

Stages of Response

Predisaster Preparation

- reduce vulnerability to disaster through building codes, regulations, etc.
- public education on disaster preparedness
- drills with public safety/health workers
- warnings of imminent disasters (people tend to underestimate likelihood of disaster, even when given warning)

Disaster Response

- immediate response to disaster
- evacuation, search & rescue, care of injured persons, restoration of public order
- development of "therapeutic community"
 - heightened sense of altruism, goodwill towards others, working together
- majority of people cope well during the actual crisis, helping one another, minimal severe psychological reactions

Postdisaster Recovery

- media coverage influences relief
- community agencies provide existing services and expand services to deal with disaster
- new agencies develop to deal with new issues
- stress levels increase due to increased demands, change in routines
- individuals become frustrated with relief agencies; decentralization causes agencies to not know where to direct aid
- relief and aid often don't match the greatest need
- despite aid and relief, most individual have increased debt
- individuals resist being in victim role, avoid dependency
- "hidden" stressors: temporary housing, loss of leisure time, children out of school and underfoot, need to talk about disaster, lack of good information, resistance to seeking treatment

Psychological Effects

Short-term Psychological Effects

- little systematic research on immediate short-term effects due to their assumed transient nature
- "acute stress disorder" with dissociation, numbing, reduced awareness, re-experiencing, anxiety, avoidance, and arousal
- sleep difficulties, irritability, and difficulty concentrating are common short-term effects

Long-term Psychological Effects

- (Mount St. Helens) 11% of highly exposed men and 21% of highly exposed women were diagnosed with depression, anxiety disorders, or PTSD during the two years following the eruption
- (Puerto Rico floods) increased diagnoses of depression, generalized anxiety disorders, and PTSD, greater use of health care services
- (Buffalo Creek) 44% with probable PTSD 2 years after the dam collapse; 28% current PTSD 14 years after collapse
- decrease in all types of symptoms over the first several years post-disaster; symptom persistence beyond two-years primarily associated with man-made disasters
- relationship problems, somatic complaints, and increased visits to medical and mental health facilities also found as long-term effects
- decreased trust, suspiciousness and anger; sense of loss of control

Factors Affecting Recovery

- individual's personal experiences in the disaster (contact with dead bodies, personal loss)
- resource loss (shelter, food, money, sense of control, trust in others, role identifications)
- individual's prior level of mental functioning
- disasters not associated with a single community (plane crash, train wreck)
- degree to which one has to rebuild life
- type of disaster
- demographics (lower incomes & larger families associated with more emotional problems; women found to have more symptoms than men; age; marital status)
- speed of onset of disaster

Phases of Psychological Recovery

- 1) Heroic Phase – emotions strong, altruistic reactions
- 2) Honeymoon Phase (3 – 6 months) – victims show energy and optimism in reconstructing lives based on promises and help from different agencies
- 3) Disillusionment Phase (1 month to 1-2 years) – victims deal with frustration of failed help
- 4) Reconstruction Phase – individuals rebuild their own lives and community

Special Populations

Children

- the majority of disaster research on children demonstrates that children's reactions are influenced by their parents' reactions....if parents are severely distressed, children can be expected to have similar symptoms
- children also have direct effects from the disaster
- parents and teachers often underestimate the degree of stress experienced by children
- typical problems include regressive behavior, fears, sleep problems, repetitive play, nightmares, intrusive symptoms during "quiet" times
- girls tend to show more psychopathology than boys
- symptoms related to degree of morbidity and/or perceived threat

Age differences:

Preschool age - repetitive play & drawings; crying, thumb sucking, fears, irritability

Elementary age - headaches, physical complaints; depression, fears, confusions, poor concentration, decreased school performance; fighting and/or withdrawal from peers

Adolescent - headaches, physical complaints; depression, confusion; poor performance; withdrawal and isolation; aggressive and/or rebellious behaviors

Elderly

Vulnerabilities

- poor physical health
- isolation
- fixed income
- higher rates of preexisting mental disorders

Strengths

- prior experience with disasters
- "lifetime" perspective

Research findings

- elderly often more resilient, less anxious post-disaster
- more concerned with loss of exterior items and house\damage, whereas younger individuals more concerned with loss of personal belongings
- less use of insurance, and more positive ratings of emotional and physical health than younger individuals

Denial and Resistance

- not all individuals will have psychological problems following disasters
- denial can be a sign of avoidance or an accurate self-perception
- denial more likely to be associated with avoidance and some evidence of intrusion or increased arousal
- others less likely to see psychological distress as legitimate if little personal damage
- others less likely to see psychological treatment as needed if little personal damage
- many individuals avoiding treatment may do so because it serves as a reminder of the tragedy
- many people will participate in initial mental health services following a disaster, but over time, decreased rate of participation in interventions is typical
- persons avoiding mental health services may seek out informal contacts with mental health providers
- nonparticipants in post-disaster mental health had higher initial rates of PTSD, with avoidance symptoms

COMMON COMMUNITY/INDIVIDUAL PROBLEMS

Post-Traumatic Stress Disorder

Re-experiencing:

- recurrent, intrusive memories
- nightmares
- flashbacks
- intense distress when reminded of the event
- physiological reactions to reminders

Avoidance:

- avoid thoughts, feelings, etc. about trauma
- avoid reminders of the trauma
- loss of memory for events related to the trauma
- decreased interest in activities
- feelings of detachment from others
- restricted feelings
- sense of foreshortened future, pessimistic outlook

Arousal:

- sleep difficulties
- irritability, anger
- difficulty concentrating
- hyper vigilance
- easily startled

MAJOR DEPRESSION

- depressed mood
- diminished interest or pleasure in all or most activities
- significant weight loss or gain, or increase/decrease in appetite
- insomnia or hypersomnia
- psychomotor agitation or retardation
- fatigue or loss of energy
- feelings of worthlessness or guilt
- indecisiveness, unable to concentrate
- recurrent thoughts of death

*Five or more symptoms which are present nearly every day and persist for two weeks or more

ANXIETY DISORDERS

- excessive anxiety and worry which persists for 6 months or longer
- unable to stop or control worrying
- physical symptoms of anxiety
 - restlessness
 - being easily fatigued
 - difficulty concentrating
 - irritability
 - muscle tension
 - sleep disturbance
- recurrent, unexpected panic attacks (heart palpitations, sweating, trembling, shortness of breath, choking, chest pain, nausea, dizziness, derealization, hot flashes/chills, numbness of losing control or dying,
- specific anxiety or fears related to situations

SUBSTANCE ABUSE

Warning Signs of Alcohol Abuse

- pattern of increased use
- secretive drinking
- drinking in the morning
- tremors or shakes when not drinking
- daily drinking
- social or occupational impairment
- drinking in high-risk situations

LISTENING TO ANGER

1. **Use active listening**, in particular, empathy, reflection, summarizing.
2. **Empathy** - listen for understanding, try to imagine how that person is feeling and why they feel justified in that feeling.
3. **Reflection** - communicate your understanding through non-verbal gestures, encouragers, and paraphrasing.
4. **Summarizing** - reflect back to the individual your understanding of what they are saying
 - What I hear you really saying is...
 - It seems to me what you're saying is...
 - The real meaning behind what you're saying is...
 - The important points seem to be...

5. DON'T LIST

WHAT NOT TO SAY

- I know how you feel.
- You shouldn't feel that way.
- It was God's will.
- You've got to get on with your life.
- You've got to be strong.
- You should be over that by now.
- You're so lucky to still have
- Good will come out of it.
- Just turn it over to God.
- You're not handling it right.
- Time heals all wounds.
- You'll get over it.
- You shouldn't talk (think) about it.
- Why didn't you.....?
- Anything else that implies guilt or blame.

c

FAMILY PROBLEMS

Characteristics of Men who Batter

- previous involvement with domestic violence
- unemployed
- uses illegal drugs at least once a year
- man and woman are from different religious backgrounds
- man saw his father hit his mother
- couple lives together, but is not married
- blue-collar occupation, if employed
- man did not graduate from high-school
- man between eighteen and thirty years old
- either person uses severe violence toward children in the home
- income below poverty level

Characteristics of the Battered Woman

- research does not identify any "typical" pattern; women of all types get battered
- certain characteristics are associated with women who stay in abusive relationships for long periods:
 - low self-esteem
 - abusive family of origin
 - alcohol or drug abuse
 - passivity in relationships
 - dependency
 - high need for affection, attention, and approval
 - traditional female sex-role

CHILD PHYSICAL ABUSE & NEGLECT

Signs of Physical Abuse

- extensive bruises
- burns
- bruises in specific shapes, such as handprints
- frequent complaints of soreness or awkward movements
- explanations for injury that are inconsistent
- overcompliance
- withdrawal, perpetual sleepiness
- acting out, aggressive, disruptive behavior
- accident proneness
- fearfulness
- dislike or shrinking of physical contact
- regressiveness, exhibiting less mature behavior

Signs of Neglect

- clothing soiled, or too small
- always seem to be hungry, hoarding or stealing food
- listless and tired
- often report caring for younger siblings even though child is quite young
- poor hygiene - bad breath, dirty teeth, smell of urine
- unattended medical or dental problems
- stealing, vandalism, or other delinquent behaviors
- frequent school absences or tardiness
- withdrawn
- inadequately dressed for the weather
- emaciated

CHILD SEXUAL ABUSE

- retrospective studies with adults indicate that approximately 25% of women and 16% of men report having been sexually abused as a child
- the median age for both boys and girls is 9
- in studies with adults, only one-third told someone about the abuse as a child
- most abuse is perpetrated by family or friends
- physical force is rarely used
- much abuse does not involve intercourse, but involves fondling or oral stimulation

Behavioral Indicators of Sexual Abuse

- Depression
- Withdrawal
- Isolation from peers
- Chronic discipline problems at school, attention-getting behavior
- Increase in physical complaints
- Inappropriate sexual acting-out, sexually seductive behavior
- Sudden drop in school performance
- Sudden change in attitude, personality
- Inappropriate understanding of sexual behavior; sex play with toys, dolls
- Poor self-image; overall appearance, cleanliness
- Reports of severe nightmares/sleep disturbances/fear of going to bed
- Regressive behavior/retreat into fantasy world
- Suicidal feelings
- Clinging/whining to non-abusive parent
- Loss of appetite
- Exaggerated fears
- Not wanting to go home/wanting to go home with teacher

Note: There is no behavior that is totally indicative of sexual abuse, nor does the absence of signs mean abuse has not occurred.

If you suspect that a child is being abused or neglected, refer to local child welfare authorities for further investigation.

Risk factors for Abusive Parents

- frequent geographical moves
- financial stresses such as uncertain employment, changes in employment or underemployment or other stressors
- married at a young age
- pregnancy before or shortly after marriage
- difficult labor and delivery
- abusive families during own childhood
- marital difficulties
- social isolation
- unrealistically high expectations for children
- role reversal with children
- poor control of children
- inability to cope with crises; low frustration tolerance
- perceive child's behavior as intentional and as very stressful
- poor parenting skills
- rigid, limited repertoire of discipline approaches

AGENCY INTERVENTIONS

Crisis Intervention

- Deal with short-term, immediate effects of disasters
- Listen, reflect, direct

Clergy Interventions

- **Be aware of the people in your congregation.** If a family member or entire family stops attending worship services, take a special note. Research shows that when there are problems in a family, family members may pull away from church participation and attendance
- **Be a facilitator.** Work to build a sense of community in the parish. Gather people together in a spirit of hope. Isolation breeds despair. Pull together with a common purpose. Be careful. Do not let the church be a “leader” of a cause. The moment the church assumes the role of leader, it may alienate those who cannot follow the cause.
- **Be well informed.** Take time to understand the long-term ecological, psychological effects of the disaster. Read so you understand. You do not need to have all the answers, but you need a framework from which to listen.
- **Watch for signs of stress and hurting.** Withdrawal, poor attendance, fatigue, inappropriate anger or tears, decline in school performance, changes in physical appearance, accidents, bruises, etc. are indicators of stress.
- **Create a safe place to talk.** People may not come to your office for counseling. Instead create a safe place to talk after church meeting, at a community gathering, or on a street corner. Relationships take time and timing. Be available where people are.
- **Be willing to trade counseling responsibilities.** Share a list of nearby pastors who are skilled in counseling. Parishioners who hold a strong independence value may only seek counseling from someone whom they do not know or will not meet the next day on the street.
- **Examine sermon themes.** In some way, each Sunday, let your people know you have some understanding of their situation. Recognize that they are having

difficulties. Don't dwell on it. Include it in a prayer or in one sentence in the sermon.

- **Limit religious clichés.** Clichés are crutches. They are easy to recite, especially when you think you should say something that sounds like what a pastor “ought to say.” Clichés may not be a comfort or be helpful. Instead, they could have the opposite effect. They may add to feelings of personal guilt.
- **Take time for visitation.** Just being there helps. Make time to see spouses together and make time to see spouses alone. Each needs to have an opportunity to express concerns in private. Remember to visit with the children and older parents. They, too, share in economic concerns.
- **Be visible.** Go where people go -- to the high school ball game, community events, etc. Be accessible. Be willing to talk when they are willing to talk. Don't ask how things are. Instead, ask “How are you?” with the emphasis on YOU.
- **Keep your sense of humor.** Pastoral care is serious business. Lighten the load on your emotions through humor.

DISASTER PREPAREDNESS

- 1) Pre-disaster training
- 2) Have an identified disaster coordinator
- 3) Community disaster plan
- 4) Plan for dissemination of information; provision of services
- 5) Multi-agency involvement and coordination
- 6) Identify at-risk individuals/groups
- 7) Coordinate with federal disaster workers
- 8) Crisis intervention
- 9) Community education
- 10) Needs assessment

GROWING TOGETHER

LAW ENFORCEMENT

IN-SERVICE TRAINING

Dr. Kati Arata
Dr. Steven Picou

DISASTER RESEARCH

Original Studies

Coconut Grove nightclub fire in Boston (1944)

- Lindeman describes emotional reactions and a "disaster syndrome" consisting of flashbacks, survivor guilt, anger & hostility, a compulsive need to talk about the trauma, and obsessive thoughts and compulsive behaviors

Buffalo Creek Flood (1972)

- 4000 of the communities' 5000 houses were destroyed
- people relocated to trailers, lost support systems
- 90% had lasting psychological symptoms two years after the flood

Mount St. Helens (1980)

- tenfold increase in depression, anxiety, and PTSD symptoms long-term

Three Mile Island (1979)

- even though no actual harm to individuals, significant, long-term increase in rates of depression, anxiety, hostility, and somatization

No Long Term Effects?

- a number of researchers have suggested that disasters typically produce only transitory effects and few will develop ongoing psychological problems as a result of a single disaster, however, as the above studies demonstrate, long-term effects are found

Types of Disasters

Natural Disasters

- floods, earthquakes, hurricanes
- may involve some warning time
- "low point" during worst part of disaster
- loss of life and property
- blame extends from God to man; often most anger associated with recovery and agencies involved
- research demonstrates usual positive community response in the aftermath with community bonding in efforts to rebuild
- primarily short-term psychological effects

"Human-caused" Disasters

Examples: Chernobyl, Exxon Valdez Oil Spill

- rarely a "low point"
- degree of victimization and harm hard to perceive
- suffering often not acknowledged
- long-term effects more common

Stages of Response

Predisaster Preparation

- reduce vulnerability to disaster through building codes, regulations, etc.
- public education on disaster preparedness
- drills with public safety/health workers
- warnings of imminent disasters (people tend to underestimate likelihood of disaster, even when given warning)

Disaster Response

- immediate response to disaster
- evacuation, search & rescue, care of injured persons, restoration of public order
- development of "therapeutic community"
 - heightened sense of altruism, goodwill towards others, working together
- majority of people cope well during the actual crisis, helping one another, minimal severe psychological reactions

Postdisaster Recovery

- media coverage influences relief
- community agencies provide existing services and expand services to deal with disaster
- new agencies develop to deal with new issues
- stress levels increase due to increased demands, change in routines
- individuals become frustrated with relief agencies; decentralization causes agencies to not know where to direct aid
- relief and aid often don't match the greatest need
- despite aid and relief, most individual have increased debt
- individuals resist being in victim role, avoid dependency
- "hidden" stressors: temporary housing, loss of leisure time, children out of school and underfoot, need to talk about disaster, lack of good information, resistance to seeking treatment

Psychological Effects

Short-term Psychological Effects

- little systematic research on immediate short-term effects due to their assumed transient nature
- "acute stress disorder" with dissociation, numbing, reduced awareness, re-experiencing, anxiety, avoidance, and arousal
- sleep difficulties, irritability, and difficulty concentrating are common short-term effects

Long-term Psychological Effects

Post-Traumatic Stress Disorder

Re-experiencing:

- recurrent, intrusive memories
- nightmares
- flashbacks
- intense distress when reminded of the event
- physiological reactions to reminders

Avoidance:

- avoid thoughts, feelings, etc. about trauma
- avoid reminders of the trauma
- loss of memory for events related to the trauma
- decreased interest in activities
- feelings of detachment from others
- restricted feelings
- sense of foreshortened future, pessimistic outlook

Arousal:

- sleep difficulties
- irritability, anger
- difficulty concentrating
- hyper vigilance
- easily startled

Factors Affecting Recovery

- individual's personal experiences in the disaster (contact with dead bodies, personal loss)
- resource loss (shelter, food, money, sense of control, trust in others, role identifications)
- individual's prior level of mental functioning
- disasters not associated with a single community (plane crash, train wreck)
- degree to which one has to rebuild life
- type of disaster
- demographics (lower incomes & larger families associated with more emotional problems; women found to have more symptoms than men; age; marital status)
- speed of onset of disaster

Phases of Psychological Recovery

- 1) Heroic Phase – emotions strong, altruistic reactions
- 2) Honeymoon Phase (3 – 6 months) – victims show energy and optimism in reconstructing lives based on promises and help from different agencies
- 3) Disillusionment Phase (1 month to 1-2 years) – victims deal with frustration of failed help
- 4) Reconstruction Phase – individuals rebuild their own lives and community

Denial and Resistance

- not all individuals will have psychological problems following disasters
- denial can be a sign of avoidance or an accurate self-perception
- denial more likely to be associated with avoidance and some evidence of intrusion or increased arousal
- others less likely to see psychological distress as legitimate if little personal damage
- others less likely to see psychological treatment as needed if little personal damage
- many individuals avoiding treatment may do so because it serves as a reminder of the tragedy
- many people will participate in initial mental health services following a disaster, but over time, decreased rate of participation in interventions is typical
- persons avoiding mental health services may seek out informal contacts with mental health providers
- nonparticipants in post-disaster mental health had higher initial rates of PTSD, with avoidance symptoms

COMMON COMMUNITY/INDIVIDUAL PROBLEMS

SUBSTANCE ABUSE

Facts about Alcoholism

- 7 to 9% of people abuse or are dependent on alcohol in any one year period
- 13 to 23% of people will have an alcohol problem at some time in their life
- men are five times more likely than women to have an alcohol problem
- alcohol abuse is a leading cause of physical problems resulting in hospitalization
- alcohol abuse is a factor in many suicides, homicides, and criminal behavior
- alcohol abuse is associated with increased rates of child abuse

Warning Signs of Alcohol Abuse

- pattern of increased use
- secretive drinking
- drinking in the morning
- tremors or shakes when not drinking
- daily drinking
- social or occupational impairment
- drinking in high-risk situations

Patterns of Alcohol Abuse

Chronic Drinking

- individual drinks large amounts every day
- drinks until intoxicated
- plans life around drinking
- social and occupational impairment evident

"Social" Alcoholic

- individual drinks primarily evenings and/or weekends
- work not usually affected
- minimal cravings

Binge Drinking

- periods of abstention followed by periodic binges
- during binge, may be intoxicated for days

DOMESTIC VIOLENCE

Types of violence

Physical violence

- slapping, hitting, kicking, punching, choking, shoving, beating, throwing things, locking out, restraining, and other acts designed to injure, hurt, endanger, or cause physical pain

Emotional abuse

- acts intended to shame, insult, ridicule, embarrass, demean, belittle, or mentally hurt another person; calling names such as fat, lazy, stupid; withholding money, affection, or attention; forbidding someone to work, handle money, see family, etc; threatening to abandon, take children away

Sexual abuse

- forcing someone to have sex when they don't want to; forcing them to engage in sex acts that do not like; forcing them to have sex with others or watch others; forcing reproductive decisions (e.g., abortion) against the individual's desires

Facts on Domestic Violence

- four to five women a day are murdered by a male partner; over thirty percent of women murdered are murdered by an intimate partner
- up to 6 million women are believed to be beaten in their homes each year; up to 90 percent never report the abuse
- one out of every three women treated in emergency rooms is a victim of violence
- up to 75% of battering victims have left or are trying to leave men who will not let them go
- between 25 to 50% of all women in American will be physically abused by a partner at least once in their lives
- more than one-third of pregnant women are abused
- 50 to 70% of men who abuse their female partner also abuse children in the home
- 25 to 33% of men who batter their wives also sexually abuse their children
- battered mothers are more likely to abuse their children, more likely to attempt suicide, and more likely to abuse drugs and alcohol

Characteristics of Men who Batter

- previous involvement with domestic violence
- unemployed
- uses illegal drugs at least once a year
- man and woman are from different religious backgrounds
- man saw his father hit his mother
- couple lives together, but is not married
- blue-collar occupation, if employed
- man did not graduate from high-school
- man between eighteen and thirty years old
- either person uses severe violence toward children in the home
- income below poverty level

Characteristics of the Battered Woman

- research does not identify any "typical" pattern; women of all types get battered
- certain characteristics are associated with women who stay in abusive relationships for long periods:
 - low self-esteem
 - abusive family of origin
 - alcohol or drug abuse
 - passivity in relationships
 - dependency
 - high need for affection, attention, and approval
 - traditional female sex-role

Resources

- batterer should be referred for treatment, individual and group are best
- couples therapy not immediately indicated, may be useful after progress made by the batterer
- victim referral to shelter, if needed; individual counseling for the victim
- children may also need short-term counseling

FAMILY PROBLEMS

CHILD PHYSICAL ABUSE & NEGLECT

Signs of Physical Abuse

- extensive bruises
- burns
- bruises in specific shapes, such as handprints
- frequent complaints of soreness or awkward movements
- explanations for injury that are inconsistent
- overcompliance
- withdrawal, perpetual sleepiness
- acting out, aggressive, disruptive behavior
- accident proneness
- fearfulness
- dislike or shrinking of physical contact
- regressiveness, exhibiting less mature behavior

BEHAVIOR PROBLEMS

- running away
- truancy
- substance abuse
- oppositional behavior
- rule violations

Risk factors for Abusive Parents

- frequent geographical moves
- financial stresses such as uncertain, changes in employment or underemployment or other stressors
- married at a young age
- pregnancy before or shortly after marriage
- difficult labor and delivery
- abusive families during own childhood
- marital difficulties
- social isolation
- unrealistically high expectations for children
- role reversal with children
- poor control of children
- inability to cope with crises; low frustration tolerance
- perceive child's behavior as intentional and as very stressful
- poor parenting skills
- rigid, limited repertoire of discipline approaches

DEPRESSION

Signs and Symptoms

- frequent depressed mood
- crying
- decreased interest in things
- change in appetite/weight (increase or decrease)
- difficulty sleeping or sleeping too much
- feeling slowed down
- loss of energy, chronically tired
- low self-esteem, self-blame
- poor attention/concentration
- suicidal thoughts or thoughts of death
- hopelessness

Facts about Depression

- 10-25% of women and 5-12% of men will experience Major Depression at some time in their life
- Major Depression is associated with more pain and physical illness and decreased physical, social, and role functioning
- 15% of people with severe Major Depression die by suicide
- risk of Major Depression higher if you've had previous episodes or if you have relatives with a history of Depression
- without treatment, over 50% will continue to have symptoms for longer than a year
- Major Depression often follows severe, stressful events

Facts about Suicide

- 80 - 95% of people who attempt and complete suicide give warning signs
- men are more likely to use lethal methods (guns) resulting in more deaths by suicide
- women more likely to attempt suicide and not die, due to less lethal methods (pills)
- improvement in depression often precedes suicide
- suicide most common among divorced people
- the rate of suicide among Native Americans is twice the national average

Common Predictors of Suicide

- depression or other mental disorder
- alcohol or other substance abuse
- suicidal ideation, talk, preparation
- prior suicide attempts
- lethal methods
- isolation, living alone, loss of support
- hopelessness, cognitive rigidity
- being an older white male
- modeling, suicide in the family
- economic or work problems, certain occupations (psychiatrists, psychologists, physicians, dentists, lawyers, & unskilled laborers)
- marital problems, family pathology
- stress and stressful events
- anger, aggression, irritability
- physical illness

CRISIS INTERVENTION

- 1) Listen
- 2) De-escalate
 - separate conflictual individuals
 - “unconditional positive regard”
 - empathy
- 3) Stay problem-focused
- 4) Contract for desired behavior
- 5) Referral to mental health, etc.
- 6) Check-back
- 7) Use Peer Listeners!

DISASTER PREPAREDNESS

- 1) Pre-disaster training
- 2) Have an identified disaster coordinator
- 3) Community disaster plan
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GROWING TOGETHER

SCHOOL PERSONNEL

IN-SERVICE TRAINING

Dr. Kati Arata
Dr. Steven Picou

CHILDREN AND DISASTERS

WHAT IS A DISASTER?

A disaster is a devastating, catastrophic event that can be life-threatening, injury producing, which may create the following distressful experiences...

POTENTIAL EXPERIENCES

- sense of fear, worry
- disruption of home, routine, etc.
- feeling that one's life or lifestyle was threatened
- witnessing death, injuries, pain
- feeling "trapped" and isolated
- being out of control of something threatening to life's basics: food, shelter, clothing, people, comfort, etc.
- having flashbacks to other catastrophes
- feeling cut off from services
- becoming separated from loved ones
- having a sense of mortality or helplessness
- feeling "survivor guilt"
- **CHILDREN ARE FORCED TO BECOME "PARENTS" TO ADULTS WHO ARE SCARED OR WORRIED**

Children

- the majority of disaster research on children demonstrates those children's reactions are influenced by their parents' reactions...if parents are severely distressed, children can be expected to have similar symptoms
- children also have direct effects from the disaster
- parents and teachers often underestimate the degree of stress experienced by children
- typical problems include regressive behavior, fears, sleep problems, repetitive play, nightmares, intrusive symptoms during "quiet" times
- girls tend to show more psychopathology than boys
- symptoms related to degree of morbidity and/or perceived threat

CHARACTERISTICS OF A CHILD WITH A PROBLEM

- any unusual complaints or illness
- isolated from the rest of the group
- child seems so pressured, anxious that he/she somehow dominates, has to distract others, or is otherwise “needy”
- changes behavior/appearance
- resistant to opening up (not just shy)
- no eye contact
- difficulty concentrating, can’t focus
- “feisty” or hyperactive/silly
- any emotional display, crying, regressed behavior
- lack of emotional expression
- poor performance
- can’t tolerate change; can’t move to next task
- lethargic, apathetic
- easily startled, jumpy

Age differences:

Preschool age - repetitive play & drawings; crying, thumb sucking, fears, irritability

Elementary age - headaches, physical complaints; depression, fears, confusions, poor concentration, decreased school performance; fighting and/or withdrawal from peers

Adolescent - headaches, physical complaints; depression, confusion; poor performance; withdrawal and isolation; aggressive and/or rebellious behaviors

SHORT TERM INTERVENTIONS

DEFUSING

Assist the child in expressing their experiences and feelings:

General events: Talk/draw about the oil spill in general: What causes oil spills?

Event specific: Talk/draw about the local oil spill you just experienced.

Personal: Talk/draw about you and your families experience with the oil spill.

ELABORATING ON TALKING AND DRAWING

ASK QUESTIONS:

- Where were you when it [the disaster/event] happened?
- What were you doing?
- Where were your friends?
- Where was your family?
- What was your first thought when it happened?
- What were you thinking about during it?
- What did you see?
- What happened?
- What changed? (include lifestyle/living conditions)
- What did you hear?
- What did you do after it?
- How did you respond?
- What did you lose?
- How did you feel?
- What did other people around you do?
- What was the silliest thing you did?
- Were you or anyone else you know injured?
- What happened to the animals around you?
- What dreams did you have after it?

- What reminds you of it? When do you think about it?
- What do you do differently since the disaster/event?
- How do you feel now?
- What makes you feel better?
- How have you gotten through rough times before?
- What would you do differently if it happened again?
- How did you help others? How would you help next time?

MOST OF THESE QUESTIONS WOULD BE HELPFUL AT ANY TIME AFTER A DISASTER/EVENT, FROM ONE DAY FOLLOWING TO ONE OR MORE YEARS LATER.

TALKING METHODS

ACTIVITIES

- child tells a story - allows metaphors
- puppets “tell” or “live” a story
- have an open discussion – using previous questions: ask for volunteers to begin with talk “general to specific”
- use photos, drawings, etc. to facilitate discussions
- use video prior to discussion to get it going
- create a skit, play, or do role-playing, related to the disaster
- do “show and tell” related to the event
- inform/educate the children about the event to make it less threatening to talk about; make it “familiar”

DRAWING METHODS

ACTIVITIES

FIRST...

Introduce Drawing as:

- another way of talking, but silently
- a means of expression used by many

Drawings should be presented to the child as an option for expression, not as a required activity!

Remember to use previous questions to help lead these activities: A question can become a theme for drawing.

ACTIVITIES:

- draw/write a book together
- write journals with pictures
- do a collective drawing - a MURAL
 - Murals tell a “collective” story
 - Murals develop/support teamwork
 - They feel “safer” for some children as opposed to individual art
 - Teacher should do very little drawing.
 - Give the mural a “place of honor” in the classroom.
 - Allow children to tell teacher what to draw.
 - Make it accessible every day for viewing, additions, etc.
 - Fill it in on an ongoing basis
 - Celebrate it: use it to demonstrate getting through something tough, facilitate discussions about it, etc.
 - take photos/slides of it when “complete”
- Draw aspects of the event (people, places, activities, etc.)
 - Suggest lots of options, not specifics, e.g., “Draw a person you saw doing something helpful after the [disaster]”
- Create a Collage:
 - Use a leading questions such as “where were you when it happened?”
 - teacher may draw/paste central image
 - children cut and paste photos, magazine pictures, articles, fabric pieces, etc. around central theme

- they may also want to draw directly onto it
- collage is the safest form of drawing because child is using other's symbols; the child feels he/she is "losing less of self"
- collages can be extremely powerful
- they provide "boundaries" for the child; this can act as a safety net (emotionally) for some

TIPS, CAUTIONS, AND PRINCIPLES FOR DRAWING METHODS

- allow a full range of expression; some kids draw recognizable “things”, other draw “abstracts”; respect all varieties
- allow children to discard their artwork
- emphasize to the children that their work will not be judged, graded, or necessarily shown to others - don't exhibit the artwork if a child does not want it shared by others
- reassure them that there is NO “RIGHT WAY” to draw
- allow use of various mediums (pastel, crayons, pencils, markers, etc. --avoid paint)
- it's preferable to do the drawing method with more than one adult present
- exercise as little control as possible over the artwork

CONCLUDING DRAWING ACTIVITIES

- A key element of the Drawing Method is discussion of the activities, afterwards. This discussion can help to bring closure to the experience; an important step of the process of expressing feelings
- Allow those who want to, to talk about their drawings
- Others will “close” by listening to others
- Use open-ended questions in this process

LONG-TERM EFFECTS

- little specific research on long-term effects following disasters
- in addition to persistence of short-term effects, expect development of disorders or secondary problems

Depression

persistent feelings of sadness, low self-esteem, low energy, morbid thoughts, apathy, withdrawal, etc

Anxiety

persistent and unrealistic worry about numerous things; difficulty sleeping, concentrating, etc.

Behavior Problems

acting out, aggressive behavior, lying, stealing, truancy, substance use

LONG-TERM INTERVENTIONS

Drawing and talking activities

Activity #1

Start Classroom meetings/class discussions on issues involving feelings and relationships.

Suggested Ages - elementary for a 20 minute period, junior or senior high school during homeroom or study hall

- Plan topics related to what the children/teenagers may be feeling. Examples might center around when there is not enough money for children's school needs, or spending, what it is like when parents fight, what happens if the family loses the family business due to the long-term effects of the oil spill, what would happen if the family needed to move.
- Class discussion on - "What would you do if..."
 - “...your family lost their family business”
 - “...your parents lost their jobs”
 - “...your family had to move”
- As teacher, introduce topic and begin by telling briefly about your own feelings or those of a close friend in a similar situation
- Set ground rules - whatever is shared in the classroom meeting is private and shouldn't be repeated outside of the classroom
- It is O.K. to express feelings and no one in the group may laugh
- Once the topic has been introduced, it is your responsibility to keep the topic on track

ACTIVITY #2

Have a bulletin board display of articles and cartoon related to the oil spill.

- Have students bring in newspaper articles, magazine articles, pictures taken from home of the effects
- Emphasize the need to maintain a healthy outlook. Include cartoons to keep a healthy attitude about the situation
- Post a list of healthy coping patterns. Emphasize hopeful outlooks and optimistic alternatives

Examples:

talk to someone you trust
share what is bothering you
listen to music and relax
get some physical exercise
do something that you enjoy
give yourself a chance to think

PARENTS AND DISASTERS

DENIAL

- parents (and teachers) often underestimate the impact on children of a disaster
- parents think children aren't aware/affected by changes in the family
- **CHILDREN KNOW!**

EMOTIONAL DYSFUNCTION

Parents may have emotional problems that will impact and interfere with parenting

- Depression
- Anxiety
- Substance Abuse

FAMILY DYSFUNCTION

- Substance Abuse
- Domestic violence
- Abuse

WHAT'S A TEACHER TO DO?

- First and foremost, cope with your own natural feelings of helplessness, fear, anger. Until you do this, you won't be much help to the children.
- Put the disaster in context; provide a perspective. Communicate a positive, "I'm not helpless" attitude.
- Start the healing process. Help the children to feel relieved and soothed.
- Identify children who may need the intervention of mental health professionals or other helpers beyond the classroom.

HOW WILL I RECOGNIZE A CHILD WITH AN EMOTIONAL PROBLEM, AND WHAT SHOULD I DO TO HELP?

- symptoms might be the same as those for anxiety or depression:
 - complaints of physical symptoms
 - persistent avoidance of being alone or withdrawal
 - unrealistic worries about harm
- child is not able to "let go" of a memory; can't "get over it"
- the degree of emotionality; and the degree of silence are both clues - Be sure to talk with the child and simply ask them quietly, confidentially, how they are feeling, coping
- make note of other physical manifestations of stress (as a result of the impact of the disaster/event)
- be aware of different forms of adjustment in different children

AM I A GOOD LISTENER?

The healthy way to deal with stress or to work through feelings is to talk about it with someone. Listening becomes an increasingly important skill as you move into the recovery phase of a disaster. Taking time to listen will help students relieve the tension, see the situation clear, and often see what they need to do to work out their problems.

To find out how your listening skills stack up, answer the following questions:

1. Do I give students the impression that I am interested and willing to hear what they have to say?
2. Do I put paperwork aside when listening to my students?
3. Do I look at students when they talk to me?
4. Does my body language show that I'm paying attention?
5. Do my responses show that I've been listening carefully?
6. Do I give all my students equal attention when they're talking to me?
7. Do I listen to students without interrupting?

TALKING WITH PARENTS

As a teacher, you may be the most important source of help outside the family for children or teenagers who are experiencing severe stress. Often when there is a crisis in the home, adult members of the family may stop being involved in community affairs. Children attending school may be the only contact the family has with the outside world. You have a very important role as you show care and concern for families.

Following are suggestions for ways of communicating best with families:

- 1. Be well informed** of the severity of the situation in your region. What are these families dealing with at this time? Will the situation get worse before it gets better? What are the long term effects? Remember you may be one of the few outside lines of communication.
- 2. Be genuine and sincere.** Try to understand the dilemma that they are experiencing and the stress they are under. As you talk about their child's behaviors and progress, express an understanding of the situation and how difficult it must be.
- 3. Respect boundaries.** As a teacher, it is very important that you have some basic understanding of the major stressors affecting your students' lives. However, there is always a fine line between what you need to know and what is just "family business." Some families may be very open, while others won't talk at all. Just continue to show your concern and practice good listening skills.
- 4. Be a good listener for verbal and non-verbal cues.** We learn the most by people's non-verbal cues, so even though the parents are quiet, you can get a good feel for how things are at home. Look at their appearance, posture and eye contact. Do they appear nervous, angry, or depressed? Are they fidgeting, slow to answer, or easily distracted? Watch to see if their non-verbal matches their verbal communicating. For example, are they smiling while talking about having to sell licenses.
- 5. Be honest** about their child's behaviors at school. If there have been problems, confront the parents. Many times children act out at school to show they need help, while trying to be strong and courageous at home. Make special note of those children whose behaviors have changed drastically in a short period of time. Ask the parents for ideas on how you can work together to best help their child.
- 6. Be aware of resources available.** Make sure you are knowledgeable about the many resources available for families experiencing a crisis. If you are someone they trust, they are more likely to make the contact.

Appendix E

Outreach Activity: Community Education Leaflet Distribution

Introduction

Community education leaflets should be designed to meet specific community needs and distributed throughout the impacted community. The leaflets provided in this chapter were part of the "Growing Together" program for a community impacted by a technological disaster. The materials are generic enough so that slight modifications to the covers would personalize the leaflets for use in any community.

There is a list of contact points in the reference directory to receive a variety of additional pamphlets which address depression, anxiety, domestic violence and substance abuse. These materials are available at a small fee per fifty (50) or hundred (100) copies ordered. Most of these organizations will also provide manuals for delivering specialized training in the identification of disaster-related disorders.

The following are suggestions for use of the leaflets provided in this chapter:

- Determine the specific needs of your community, and review packaged leaflets for appearance and composition. The leaflets are public domain, without copyright restrictions and can be used in their entirety or modified as required to meet your community needs.
- Determine and place leaflets in areas of greatest public access (community centers, mental health facilities, hospitals, clinics, community centers, civic organizations' meeting places, etc.).
- If your community hosts major public events, like fairs, festivals, fishing rodeos, or other activities, distribute leaflets from a booth or racks in a prominent location during the event. To draw interest to these materials a give-away of pencils, pens, buttons, and no-cost raffle items might be offered. Many community merchants will be willing to contribute door prizes or raffle prizes to community service projects.
- Finally check with your local postal services to determine the cost of bulk mailings and how to acquire the mailing lists for the community residents to whom you wish to distribute public service leaflets. If the community is small enough or the impacted area is a neighborhood, door-to-door postings may be

possible. Be sure to package the leaflets to meet current weather conditions and include on each leaflet the organization and phone number of individuals or organization to obtain additional information.

Note to readers: the following leaflets are in a format that you can pull right out of the guidebook and copy for distribution. There are eight (8) leaflets and they are placed in this guidebook with the majority of the text on the first page, and the title on the second page. The specific order in the appendix is:

- “A Community Education Program” – this leaflet describes the full Growing Together program.
- “All About Alcohol: Just for Kids”
- “Plain Talk about Helping Children Cope with Disaster”
- “Plain Talk about Depression”
- “Plain Talk about Managing Anger
- “Plain Talk About Post-Traumatic Stress Disorder
- “Plain Talk About Domestic Violence and Wife Abuse”
- “Plain Talk about Alcohol”

If it is a three column leaflet, copy on legal paper and fold in thirds. If it is a four column leaflet, copy on legal paper and fold in quarters.

They are also provided in an electronic form so you can tailor the leaflets to meet your needs. For example, you may want to add clip art, or contact numbers for local mental health facilities, or new dates for the running of the radio series in your community.

Introduction

Disaster researchers, mental health professionals and victims of technological accidents have little or no social scientific information regarding the mitigation and recovery from such events. Unlike recovery from natural disasters, communities experiencing massive technological malfunctions (Love Canal, Chernobyl, Bophal, Three-Mile island, Prince William Sound) are characterized by long-term negative social and psychological impacts. This fact raises questions regarding traditional views of community recovery from disasters.

Technological disasters, unlike natural disasters:

- * are perceived to be the result of human failure
- * have an uncertain scope of potential effects
- * are not clearly defined by time and spatial boundaries
- * have no traditional response system in place to aid victims, who have to litigate for damages.
- * have long-term social impacts

For these reasons a variety of needs exist for communities impacted by technological disasters. Community recovery from technological disasters should include activities ranging from education to counseling and group development, all aimed at creating an understanding of what happened and adjusting to chronic social problems resulting from the disaster.

The "Growing Together" Community Education Program

This community demonstration project has solicited and received input from local mental health providers and consists

of six (6) pilot programs for facilitating community understanding of technological disasters. Three pilot programs target the community through radio, newspaper and leaflet distribution of educational materials. Three pilot programs target individuals through the talking circle, peer listener and in-service training activities. These pilot programs will provide educational materials for understanding individual responses to technological disasters.

- **Community Education Radio Series**

A series of five 30-minute broadcasts on technological disasters, their consequences and community recovery will air March through November 1996. Several programs will focus on the development and management of coping skills. Written questions will be taken and answered by local mental health professionals by phone immediately following each program.

- **Community Education Newspaper Series**

Nine articles will be published in the Cordova Times between March and July 1996. The articles address technological disasters, their impacts, and coping strategies for victims.

- **Community Education Leaflets**

As part of the outreach efforts of Sound Alternatives and the Family Resource Center, leaflets have been prepared on different aspects of the "Growing Together Program." The leaflets are being distributed throughout the community. Topics include managing anger, domestic violence, overcoming depression, and alcohol abuse, among others.

- **Peer Listener Training**

This program is designed to train volunteers from two high risk groups, commercial fishers and Alaska Natives, to provide a number of services to the community. Peer listeners will receive training in listening skills, anger management, depression, and other family problems to assist family and

friends with on-going concerns throughout the community. While intended to deal with the long-term effects of a technological disaster, this network will remain in the community as an on-going resource. In addition the network will be in place and available should future disasters effect the community. The program will include a two-day training session in February 1996 and debriefings throughout the year.

- **The Talking Circle**

The Talking Circle Program was developed by the Alaska Native community in Cordova. The talking circle is organized around the Alaska Native grieving cycle and will provide opportunities for residents to voice their opinions and concerns about the impacts of future oil spills. The "Talking Circle" is scheduled as a two-day event on January 27 and 28.

- **In-Service Training**

Information on technological disasters, their chronic impacts and individual responses will be presented to volunteers representing local mental health workers, the clergy, teachers, law enforcement and educational administrators. Training will also be provided for facilitating coping skills and responding to symptoms of chronic impacts. Three in-service training programs are scheduled for February 1996. Follow-up data will be collected in September 1996.

"It's Just Like Being A Friend"

Education,

Awareness,

Understanding

A Community Education Program

Growing Together

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Growing Together

Ads vs. Real Life

Turn on the TV.

The ads for alcohol almost jump out at you: Why, there's Spuds MacKenzie, the original "party animal." He's on a yacht, cha-cha-ing with showgirls.

Turn the channel.

It's a washed-out rock star. He's singing the praises of a new wine cooler.

Let's try it one more time.

Now we've got a couple of ex-jocks.

They're arguing about whether their brand of beer tastes great or is less filling.

It doesn't matter where you look. There's always someone trying to sell you booze.

Not only that, but the people in the commercials are always beautiful, and they're always having fun. What they seem to say is this: "Drink and you'll be as happy as we are."

What they don't say is this: Alcohol is a drug. In fact, it can be dangerous, even deadly.

A simple look at the numbers will prove that. In the United States at least 20 million people have serious problems with alcohol. Hundreds of thousands die each year from alcohol-related accidents and health problems.

One reason why is that a lot of people really don't understand what alcohol is and how it affects the mind and body.

That's the point of this pamphlet. In it we'll discuss what alcohol is and how it works inside of us. We'll also talk about some of the problems it can cause and we'll suggest

ways to avoid those problems. Because real life is different than ads on TV. In real life, people get hurt by alcohol.

Real life is different than ads on TV. In real life, people get *hurt* by alcohol.

Booze Basics

There are three main forms of alcohol. **Beer** is made from grains and malt, with yeast added for bubble and hops for taste. It usually contains 3-6 percent alcohol. **Wine** is made from grapes and other fermented juices. It contains 7-14 percent pure alcohol.

Liquor, like whiskey or vodka, is usually made from grains. It contains at least 40 percent alcohol. A simple formula is that one ounce-and-a-half shot of liquor is about equal in strength to a five-ounce glass of wine or a 12-ounce bottle of beer. They all contain roughly the same amount of pure alcohol. Beer and wine are just more watered down, that's all.

Pick Your Poison

The active ingredient in all the different types of alcohol is a chemical called *ethanol*, or *ethyl alcohol*. Ethanol is a poison in large doses, but in smaller doses it can cause feelings of relaxation and excitement. Still, since it is a poison, ethanol can also cause serious problems in the body.

When a person drinks alcohol, the ethanol in that drink goes directly to the stomach. From there, it moves quickly into the bloodstream, where it is carried to the brain and other parts of the body. The liver filters alcohol from the bloodstream and eliminates it from the body. This process is a slow one since the liver is only able to filter about a half-ounce of alcohol each hour. When someone drinks more than that, he or she gradually begins to feel the *toxic* (or poisonous) effects of alcohol.

In fact, a word for this process is *intoxication*. Another word for intoxication is *drunk*.

Alcohol, the Drug

Alcohol is a depressant drug, one that depresses (or slows down) the brain and the nervous system. When someone drinks more than the liver can filter, extra alcohol builds up in the bloodstream. That slows the brain and nervous system even more. That's when a drinker starts to lose control.

You can hear it in a drinker's voice and see it in his or her actions as alcohol begins to affect speech, coordination, and mood. These changes are particularly dangerous if a person is driving a car. and judging from the number of people arrested for drunk driving every year, a lot of them are.

Who's in Charge Here, Anyway?

So if a person takes a couple of drinks to relax, is that harmful? Probably not, but it could be--eventually.

That's because people who drink to relax can learn to rely on alcohol. And soon they're not able to relax on their own. That can lead to even more drinking. And that can turn into something else to worry about.

That's why it's better to use natural, non-

People who drink to relax can learn to rely on alcohol. And *that* can turn into something else to worry about.

drug ways to relax. That way, you get to be the one in control of your life, not some chemical.

Here's Looking at You, Kid

There are a lot of reasons to drink. If you've watched even half the commercials on TV, you've already seen more reasons than you'll ever need.

But when you think about it there's only one reason for not drinking. And it makes more sense than all the reasons for drinking: because drinking can take away the power that you need in your life to make things happen. Important things.

Think about that.

Growing Together

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Education,

Awareness,

Understanding

**ALL ABOUT
ALCOHOL**

Just For Kids

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Disasters Happen

Striking viciously and without warning, disasters are caused by forces of nature and by people using force.

Children may endure the devastation of disasters in their own homes and communities. Or they may learn about them in school or by watching movies or televised news reports, which can seem almost as puzzling and frightening as the real thing. Exposed to disasters, whether directly or indirectly, many children display fears and anxieties that can seem extreme to some adults.

All are normal reactions. Yet without proper reassurance and counseling, the impact of a disaster can remain with a child throughout his or her lifetime. It doesn't need to.

With the right support and guidance, even the youngest children can develop skills needed to become resilient enough to overcome and weather the most violent and traumatic disaster, and even grow from the experience.

Understanding the Child

The course of growing up for the average child consists of certain regularities. For most school age children regularity involves the presence of parents, awakening in the morning, preparing for school, meeting with the same teacher, the same children, playing with friends, sleeping in his or her own bed, essentially being able to depend on a series of predictable events. The child expects dependability from adults and certainly from

the forces of the environment around him or her. For pre-schoolers life is much the same. They spend their day within the familiarity of their world, be it at home, with baby-sitters, or a nursery school, etc. The family remains more or less constant. When there is an interruption in this natural flow of life, the child experiences anxiety and fear. How the adult helps the child to resolve these "problem times" may have a lasting effect on the child.

Fear and Anxiety

Fear is a normal reaction to any danger which threatens life or well-being.

What are children afraid of after a disaster?

They are afraid of recurrence, or injury, or death.

They are afraid of being separated from their family.

They are afraid of being left alone. Parents should recognize, however, that some fears stem from the child's imagination or fantasies, as well as from a real event. Even after the event has passed the anxiety will sometimes remain. Children may not be able to describe anxious feelings. Even though they are intensely afraid, they may be genuinely unable to give an explanation that makes rational sense.

The child, who is dependent on adults for love, care, and security, fears most the loss of parents and being left alone. In a disaster, even the child who is usually competent and unafraid may react with fear and considerable

anxiety to an event which threatens the family. Since adults also react emotionally with normal and natural fear to disaster, the child becomes terrified, taking parental fears as proof that the danger is real. A child having less experience in distinguishing a real threat is likely to be plagued by fears with no basis in reality. It is important to note that fantasized danger can be as real and threatening as "real danger."

Mobilize People and Other Resources Around the Child

A child who experiences a disaster, or sees it on TV, may react in shock, which can manifest itself in regressive behaviors. The child's sense of security is shattered. He or she may be reluctant to stay alone or go out of the house; may express fears of going to sleep at night or being in the dark; or may report nightmares or symptoms of illness, such as stomach aches.

How to Help:

- Express your love for the child, both verbally and physically, more often than usual. Raising the level of psychological and physical warmth within a home gives children a sense of calm.
- Maintain normal routines and traditions. Retain as much as possible a sense of stability and familiarity in the child's life.
- Make sure you are available to children when they need to talk about the disaster.

- Read stories about disasters; how people deal with them, and who helps.
- Discuss the kinds of emotional reactions people have. Explain that it's okay to feel angry, but not to attack those who make you angry.

Strengthen the Child's Communications and Coping Skills

A child who has experienced a disaster may not be able to talk about it or express the feelings triggered by the graphic images and horror. He or she may not have the mechanisms necessary to cope with the problem or overcome its harmful effects. There may be uncertainty about a future that seems to offer so much trauma--and offers so little explanation for it.

How to Help:

- Encourage the child to talk about his or her feelings. Supply words if the child has difficulty labeling feelings. Listen closely, because emotions may be expressed indirectly. Remain patient and understanding.
- Tell the child about your own feelings, but consider the child's age and maturity and don't overdo it. Be clear and consistent, and make sure your words are supported by your own behavior.
- Encourage the child to take positive action and to be involved in helping victims.
- Let the child see you taking action, too.

Be A Role Model for Your Children

In a disaster, they'll look to you and other adults for help. How *you* react to an emergency gives them clues on how to act. If you react with alarm, a child may become more scared. They see our fear as proof that the danger is real. If you seem overcome with a sense of loss, a child may feel their losses more strongly.

Children's fears may also stem from their imagination, and you should take these feelings seriously. A child who *feels* afraid is afraid. Your words and actions can provide reassurance. When talking with your child, be sure to present a realistic picture that is both honest and manageable.

Feelings of fear are healthy and natural for adults and children. But as an adult, you need to keep control of the situation. When you are sure that danger has passed, concentrate on your child's emotional needs by asking the child what's uppermost in his or her mind. Having children participate in the family's recovery activities will help them feel that their life will return to "normal." Your response during this time may have a lasting impact.

You can help children cope by understanding what causes their anxieties and fears. Reassure them with firmness and love. Your children will realize that life will eventually return to normal. If a child does not respond to the above suggestions, seek help from a mental health specialist or a member of the clergy.

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PLAIN TALK ABOUT HELPING CHILDREN COPE WITH DISASTER

Everyone feels "blue" at times. In fact, transitory feelings of sadness or discouragement are perfectly normal, especially during particularly difficult times. But a person who cannot "snap out of it" or get over these feelings within a few weeks may be suffering from the illness called depression.

What is Depression?

Depression is an emotional state of feeling sad, lonely and dejected, often accompanied by fatigue, headaches and other physical symptoms. The term "depression" can be confusing since it's often used to describe normal emotional reactions. At the same time, the illness may be hard to recognize because its symptoms may be so easily attributed to other causes. People tend to deny the existence of depression by saying things like, "She has a right to be depressed! Look at what she's gone through." This attitude fails to recognize that people can go through tremendous hardships and stress without developing depression, and that those who suffer from depression can and should seek treatment.

Signs of Depression

Nearly everyone suffering from depression has *pervasive feelings of sadness*. In addition, depressed people may feel *helpless, hopeless, and irritable*. You should seek professional help if you or someone you know has had four or more of the following symptoms continually or most of the time for more than two weeks:

- * Noticeable *change of appetite*, either significant weight loss not attributable to dieting or weight gain.
- * Noticeable *change in sleeping patterns* such as fitful sleep, inability to sleep, early morning awakening, or sleeping too much.
- * *Loss of interest* and pleasure in activities formerly enjoyed.
- * Loss of energy, *fatigue*.
- * Feelings of *worthlessness*.
- * Persistent feelings of *hopelessness*.
- * Feelings of inappropriate *guilt*.
- * *Inability to concentrate* or think, indecisiveness.
- * Recurring *thoughts of death or suicide*, wishing to die, or attempting suicide.
- * *Melancholia* (defined as overwhelming feelings of sadness and grief), accompanied by waking at least two hours earlier than normal in the morning, feeling more depressed in the morning, and moving significantly more slowly.
- * *Disturbed thinking*, a symptom developed by some severely depressed persons. For example, severely depressed people sometimes have beliefs not based in reality about physical disease, sinfulness, or poverty.

- * *Physical symptoms*, such as headaches or stomach aches.

For many victims of depression, these mental and physical feelings seem to follow them night and day, appear to have no end, and are not alleviated by happy events or good news. Unfortunately, many fail to recognize the illness and get the treatment that would alleviate their suffering. But if people looked at all of these symptoms together and noticed that they occur over long periods of time, they might recognize them as signs of depression.

Who is Affected by Depression?

Depression is an equal opportunity illness. It can affect anyone at any age. Sometimes depression is triggered by an emotional stress, such as chronic physical illness, major environmental change, divorce or death in the family. Other times there may be no apparent cause. Current research suggests that treatable depression is very prevalent among children and adolescents, especially among offspring of adults with depression. Depression can also strike late in life, and its symptoms-- including memory impairment, slowed speech, and slowed movement--may be mistaken for those of senility or stroke.

Treatments

Depression is one of the most treatable mental illnesses. Between 80 and 90 percent of all depressed people respond to treatment and nearly *all* depressed people who receive treatment see at least some relief from their

symptoms. Along with the great strides made in understanding the causes of depression, scientists are closer to understanding how treatment of the illness works.

How Can I Help Myself?

Since what you think and do plays a major role in your depression, here are some ways to let go of your depression:

- *Think of ways you can let go of your depression*. Answer these questions. Do I really want to change? What benefits do I get for being depressed? What does it do for me? What payoffs would I get if I let go of my depression? If I was not depressed, what would I be doing?
- *Make a list of things you like about yourself*. Think about and enjoy your positive assets and accomplishments.
- *Pamper yourself*. Give yourself some pamper time. Take a leisurely walk, enjoy a soothing bath, or listen to your favorite music. Do whatever you can to relax and enjoy the extra time you have.
- *Get busy doing things you enjoy*, like being with a friend, or working on hobbies.

When Should I Seek Help?

Seek help if you:

- have practiced the methods described in this leaflet and still feel depressed.

- are thinking about suicide.
- are experiencing severe mood swings.
- think your depression is related to other problems that require professional help.
- think talking with someone might help.

Where Should I Go for Help?

- Comprehensive Care Center
- Family Service Agency
- Trusted minister, priest or rabbi
- Ask people you trust (physician, clergyman, etc.) to recommend a good therapist.

How Can I Help My Depressed Friend?

- Don't moralize or pressure your friend to "Put a smile on your face!" Often people feel worse after hearing such statements.
- Be available. Tell your friend how much you care. Then listen well.
- Urge your friend to get professional help if necessary. Offer to go along if doing so will make it easier.

Growing Together

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PLAIN TALK ABOUT DEPRESSION

Everyone responds to crisis in different ways. When things don't seem to work out or make sense, a normal, healthy emotion emerges--*anger*. Some manifest their anger by yelling, swearing or hurting others or themselves. Others suppress their anger, pretending it does not exist. In the end anger may surface, hurting others.

Anger is an emotion that can be managed before it hurts others. Here are three ways of managing your anger:

Look at Situations Differently

Sometimes you may need to change your perception of what motivates others' behavior. If you jump to the conclusion that someone does something to be rude and inconsiderate, then you will be quicker to anger. What is it that really makes you angry? Is it the other person's action (someone may cut in front of you in line or on the highway) or the idea that the person is taking advantage of you. In reality, the other person may not have seen you or they may not realize that their actions have upset you.

When you become angry, stop and think: What am I angry about? Was it the action, or was it what you think the action means?

If your anger is from a perception of what the action means; try altering that perception and see if the intensity of your anger decreases.

Give voice to how you feel, why, and what you want

It is a simple fact, people who talk about their feelings, handle crises better than those who do not. It's okay to tell others how you feel, even loudly, but do it without violence. Swearing at, belittling, insulting, tearing down, shaming, or verbally abusing others is not okay. This only builds walls between friends and family. Sharing your feelings without violence builds relationships.

Make the focus of your feelings what you want to change. Begin by learning to say "I" instead of "you." This shows you are willing to take responsibility for your feelings and not blame others. This will make others more willing to listen and gives you power over your feelings. Talk

and then listen. Others want to express their feelings too.

"Learning to calm down before taking action will help you handle anger in ways that are not harmful to yourself or others."

Calm down

When you are angry, it is easy to lose control and do things you otherwise would not do. Learning to calm down before taking action will help you handle anger in ways that are not harmful to yourself or others. As you feel your anger rise, find a way to calm down. You may find that one thing works better than others. When our children's emotions boil over we give them "time-out" to calm down. Sometimes adults too, need "time-out" to remove themselves from the situation.

Here are some other ways to calm down:

- *Count to 100*
- *Go for a walk or a run*
- *Do work, like mowing the lawn or washing windows*
- *Go someplace else. If you are angry at home, go to the store*
- *Read a book*

Remember that if you are feeling anger others probably are too. Talk and listen. Others may be able to give you ideas that will relieve your emotions, helping you to grow closer together.

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PLAIN TALK ABOUT MANAGING ANGER

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It's been called shell shock, battle fatigue, accident neurosis and post rape syndrome. It has often been misunderstood or misdiagnosed, even though the disorder has very specific symptoms that form a definite psychological syndrome.

The disorder is *post-traumatic stress disorder* (PTSD) and it affects hundreds of thousands of people who have survived earthquakes, accidental disasters such as airplane crashes, or manmade disasters such as inner-city violence, domestic abuse, rape, war and technological disasters.

In some cases the symptoms of PTSD disappear with time, while in others they persist for many years. It often occurs with-- or leads to-- other psychiatric illnesses, such as depression.

Not all people who experience trauma require treatment; some recover with the help of family, friends, pastor or rabbi. However, many do need professional help to successfully recover from the psychological damage that can result from experiencing, witnessing or participating in an overwhelmingly traumatic event.

Symptoms

Post-traumatic stress disorder usually appears within three months of the trauma, but sometimes the disorder surfaces months or even years later.

Intrusive Symptoms

Often people suffering from PTSD have an episode where the *traumatic event "intrudes" into their current life*. This can happen in sudden, vivid memories that are accompanied by very painful emotions which take over the victim's attention. This "re-experience" of the trauma is a *flashback*--a recollection that is so strong that the individual thinks he or she is actually experiencing the trauma again or seeing it unfold before his or her eyes. In traumatized children, this reliving of the trauma occurs in the form of action, through repetitive play.

At other times the re-experience occurs in *nightmares* that are so powerful the person awakens screaming in terror, as if he or she were re-enacting the trauma in sleep. In young children, distressing dreams of the traumatic event evolve into generalized nightmares of monsters, of rescuing others or of threats to self or others.

At times, the re-experience comes as a *sudden, painful onslaught of emotions* that seem to have no cause. These emotions, often those of grief, can also be of anger or fear. Individuals say these emotional experiences occur repeatedly, much like memories or dreams about the traumatic event.

Symptoms of Avoidance

Another set of symptoms involves what is called *avoidance phenomena*. This affects the person's relationships with others, because he or she often avoids close emotional ties with family, colleagues, or friends. At first, the person feels numb, has

diminished emotions and can complete only routine, mechanical activities. Later, when re-experiencing the event begins, the individual alters between the flood of emotions caused by re-experiencing and the inability to feel or express any emotions at all.

The person with PTSD also avoids *situations that are reminders of the traumatic event* because the symptoms worsen when a situation or activity occurs that resembles, even in part, the original trauma. Over time a person can become so fearful of particular situations that his or her daily life is ruled by attempting to avoid them. For PTSD sufferers, inability to work out grief and anger over injury or loss during the traumatic event, means the trauma will continue to control their behavior without their being aware of it. *Depression* is a common product of this inability to resolve painful feelings.

Associated Features

Finally, many who suffer with PTSD also attempt to rid themselves of their painful re-experiences, loneliness, and panic attacks by *abusing alcohol or other drugs as a "self medication"* that helps them to blunt their emotions and forget the trauma. A person with PTSD may also show poor control over his or her impulses, and may be at risk for suicide.

Treatment

One important form of therapy for those who struggle with PTSD is *behavior therapy*. This treatment approach focuses on

correcting the PTSD sufferer's painful and intrusive patterns of behavior and thought by teaching him or her relaxation techniques, and examining (and challenging) his or her mental processes.

Psychiatrists and other mental health professionals also treat cases of PTSD by using *psychodynamic psychotherapy*. Post-traumatic stress disorder results, in part, from the difference between the individual's personal values or view of the world and the reality that he or she witnessed or lived during the traumatic event. Psychodynamic psychotherapy, then, focuses on helping the individual examine personal values and how behavior and experience during the traumatic event violated them.

In addition, therapists may recommend family therapy because the behavior of spouse and children may result from and affect the person suffering from PTSD. By working with the family, the therapist can work to bring about change within the family. Its members can learn to recognize and cope with the range of emotions each feels. They do this by learning good communication, parenting and stress management techniques.

Therapy involving *rap groups or peer-counseling groups* is another effective treatment for many suffering PTSD. This method encourages survivors of similar traumatic events to share their experiences and reactions to them. In doing so, group members help each other realize that many people would have done the same thing and felt the same emotions.

Generally, such treatments can be completed on an outpatient basis. But if the disorder is so severe that the person is dangerous to himself or others, inpatient treatment might be recommended.

Resources

Anxiety Disorders Association of America, Inc.
6000 Executive Blvd.
Rockville, MD 20852-3801
(301) 831-8350

International Society for Traumatic Stress Studies
435 N. Michigan Ave., Suite 1717
Chicago, IL 60611-4067
(312) 644-0828

National Center for Post-traumatic Stress Disorder
VAM & ROC 116D
Rural Route 5
White River Junction, VT 05009
(802) 296-5132

National Institute of Mental Health
5600 Fishers Lane
Rockville, MD 20857
(301) 443-2403

Growing Together

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Education,

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PLAIN TALK ABOUT POST-TRAUMATIC STRESS DISORDER

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A Look at domestic violence

The most common form of domestic violence is "wife" battering and abuse. It occurs much more often than most people imagine. Many women suffer from chronic abuse for years without getting help.

In this case, the term "wife" in "wife battering" refers to any woman in a domestic or intimate relationship with a man who is violent or abusive toward her. "Abuse" and "battering" are much more than the normal conflicts and stress that occur in all close relationships. There is a big difference between the arguments that occur in most households, and violence or abuse that causes serious injury and death.

Studies have found that most injuries are to the head and neck and, in addition to bruises, strangle marks, black eyes, and split lips, result in eye damage, fractured jaws, broken noses, and permanent hearing loss. Assaults to the trunk of the body are almost as common and produce broken collarbones, bruised and broken ribs, and internal hemorrhaging among other things. These are serious consequences of serious assaults. Another serious aspect is that once wife beating occurs, it is likely to happen again and again, with violence getting worse over time.

Why do men abuse their wives?

Generally, public opinion supports traditional family relations and male authority. The

battering syndrome is both cause and effect of stereotyped roles and the unequal power relations between men and women.

In present-day society, violence in the movies, on TV, and in the newspapers is familiar and accepted. Many husbands who abuse their wives have learned that violence, especially against women, is okay. They often were abused themselves as children or saw their mothers abused. The battered wife most likely grew up in a similar environment.

There are other psychological reasons. A wife abuser tends to be filled with anger, resentment, suspicion, and tension. He also, underneath all his aggressive behavior, can be insecure and feel like a loser. He may use violence to give vent to the bad feelings he has about himself or his lot in life. The wife, in these situations, often becomes the target of the husband who is frustrated at work or angry at his boss.

Patterns

Familiar patterns of wife abuse often develop in three phases: the tension building phase, the explosion phase, and the loving phase. The tension builds over a series of small occurrences such as a wife's request for money, her refusal to do all the household chores without her husband's help, her serving a meal not pleasing to him, or a similar incident. What follows is inevitable. She may become the object of any one of the following assaults: Punching with fists, choking, kicking, knifing, slamming against a wall or throwing to the floor. When the

beating is over the couple moves into the third phase. The batterer feels guilty about what he has done. He is sorry and assures his wife that it will never happen again. At that moment he may believe he will never hurt her again. However, often the beatings continue.

Why do women stay?

Women have learned that it may be their own feelings of fear, guilt, or shame that keep them in an abusive relationship. Often, social and economic pressures compel a woman to stay. Sometimes she stays for lack of somewhere to go for shelter and advice or because she feels that she loves her husband and lives with the hope that he might change. Tragically, in most cases, the abuse continues, for in fact her husband's behavior has nothing to do with her actions.

What can a battered woman do?

The first step for a woman to take is to admit to herself that she is being abused and that she is not being treated fairly. A woman then needs to talk to people who can help. Good friends can lend support and guidance. Organizations that are devoted to women's concerns can assist her. They might help her explore her options in new ways. Emergency shelters for women, hotlines, women's organizations, social service agencies, community mental health centers, and hospitals are all possible sources of support.

Prevention

Since there is no one cause of wife abuse, there is no easy way to prevent it. Prevention starts with people changing their attitudes toward violence and women. No one deserves to be beaten or physically threatened, in any situation. The abuser needs to know that it is human for him to feel anger, but inhuman to release those feelings by abusing others. By learning to deal with his emotions through acceptable behavior, he can gain respect for himself and others. It's another step in developing mutual respect in the husband/wife relationship where each sees the other as a worthy human being.

**National Domestic Violence
Hotline
1-800-333-7233**

Growing Together

"It's Just Like Being A
Friend"

Education,

Awareness,

Understanding

PLAIN TALK ABOUT DOMESTIC VIOLENCE AND WIFE ABUSE

This community education leaflet series was developed by Sound Alternatives and the Family Resource Center (Cordova), in cooperation with the University of South Alabama (Mobile). This series is one segment of a larger demonstration project developed, funded and directed by the Prince William Sound Regional Citizens' Advisory Council. The concept for the project dates back to 1989, when citizens from the region organized the Regional Citizens' Advisory Council following the Exxon Valdez oil spill.

The use of various substances to modify mood or behavior is generally regarded as normal and acceptable in our society. Many people drink coffee or tea for the stimulant effects of caffeine, or engage in the social drinking of alcohol. On the other hand, there are wide cultural variations. In some groups, even the recreational use of alcohol is frowned upon, whereas in other groups the use of various legal or illegal substances for mood-altering effects has become widely accepted. In addition, certain over-the-counter and prescription medications may be medically recommended to relieve tension or pain or to suppress appetite.

Substance abuse is by far the biggest cause of premature and preventable death, illness and disability in our society. Substance abuse includes the misuse of alcohol, cigarettes, illegal and legal drugs and medications, and other mood-altering substances. According to the National Institute of Mental Health, nearly 17 percent of the U.S. population 18 years old and over will abuse alcohol or drugs during their lifetimes. Substance abuse affects millions more through the effects on the families, and people killed or injured by abusers under the influence.

Alcohol Abuse

While alcohol is considered by psychiatrists to be a "drug," for the purposes of this pamphlet its abuse is being discussed separately from that of other drugs.

The National Council on Alcoholism and Drug Dependence (NCADD) and the American Society of Addiction Medicine

(ASAM) define alcoholism as: *A primary, chronic disease...characterized by impaired control over drinking, preoccupation with the drug alcohol, use of alcohol despite adverse consequences, and distortions in thinking, most notably denial.*" Further, the two groups say that the development of alcoholism in a person is influenced by genetic, psychosocial, and environmental factors, and that the disease of alcoholism is often progressive and fatal.

Dangerous Impacts

The following characteristics of alcoholism leave little doubt as to the devastating impact of the disease:

- Alcoholism is a progressive disease that generally first appears between the ages of 20 and 40, although children can become alcoholics.
- Drinking patterns vary by age and sex. At all ages, two to five times more males than females are heavy drinkers. For both males and females, drinking prevalence is highest and abstinence lowest in the 21 to 34 age range.
- Alcohol dependence tends to cluster in families.
- On average, it takes five to 15 years for an adult to become alcoholic; adolescents can become alcoholic, by contrast, in six to 18 months of heavy drinking.
- Women seem to be more sensitive to alcohol than men. When differences in weight are factored out, women still seem

to get higher blood levels of alcohol from drinking, a fact which may increase their risk.

- Long-term, heavy drinking can cause dementia, in which the individual loses memory and the ability to think abstractly, to recall names of common objects, to use correct words to describe recognized objects or to follow simple instructions.
- As drinking continues, dependence develops and sobriety brings serious withdrawal symptoms such as delirium tremens (DTs) that include physical trembling, delusions, hallucinations, sweating and high blood pressure.
- Alcohol dependence is often associated with depression. Depression typically makes its appearance before the drinking. Studies show that, among the general population, those with diagnosable depression are at a somewhat elevated risk for development of alcoholism. Among women, however, the risk is almost tripled.
- Generally, abuse occurs in one of three patterns: regular, daily intoxication; drinking large amounts of alcohol at specific times, such as every weekend; and long periods of sobriety interspersed with binges of heavy daily drinking that last for weeks or months.
- Physical complications of chronic alcohol dependence include cirrhosis (liver damage), hepatitis, altered brain-cell functioning, nerve damage, gastritis

(inflammation of the stomach), premature aging, impotence and infertility, and a variety of reproductive disorders. Chronic alcohol dependence also increases the risk and severity of heart disease, pneumonia, tuberculosis and neurological disorders.

- Recent studies have strongly suggested that in pregnant women alcohol abuse has harmful effects on the development of the fetus' brain and other parts of its central nervous system, an effect known as *fetal alcohol syndrome* (FAS). FAS is the leading preventable cause of mental retardation in children. Other studies suggest that children of alcoholics are at increased risk themselves for alcoholism and addiction, as well as other psychological problems linked to the addiction's disruptive effect on the family life. This makes children of alcoholics important targets for alcohol abuse prevention efforts.

Because alcoholism involves psychological, environmental, biological and cultural factors, treatment programs for the condition may vary in emphasis. Most programs, however, include a variety of therapies geared toward abstinence and designed to approach the illness from all vantage points.

Psychotherapy helps patients understand their behavior and motivations, develop higher self-esteem and cope with stress. Because long-term support is considered essential, self-help groups such as Alcoholics Anonymous are often part of a rehabilitation program. Some programs also prescribe daily doses of disulfiram (Antabuse), which induces violent

physical reactions to alcohol and thus discourages drinking.

Treatment

Recovery is possible for substance abusers, but addiction is difficult to beat without assistance. There are many treatment programs available throughout the country to help people kick their habits and stay off substances.

The first step to treatment is admission by the abuser that he or she has a problem. This is often a major hurdle, for denial is a typical and powerful force with drug abuse.

Detoxification, ridding the body of the drug, is the starting point of any treatment program. this may be followed by medication, such as anti-depressants, which help control the craving and relieve the severe depression that often accompanies withdrawal from the addictive substance.

Therapy programs also guide the recovering substance abuser toward other alternatives to curb craving for the drug. This help may be through a combination of individual, group and family counseling as well as other techniques aimed at changing behavior. The ultimate goal of recovery programs is to improve self-image and promote healthful, drug-free living.

Professional support is also available to family members who need help for themselves as they strive to break out of the destructive environment the user's addiction has created. one option is a telephone call to an anonymous service such as the nationwide hotline run by

the National Institute on Drug Abuse (1-800-662-HELP). Family therapy is often helpful, as is individual support from a trusted friend, family doctor, clergy member or counselor. Among the support groups formed for the families of substance abusers are Al-Anon, Nar-Anon, Families Anonymous, and Coc-Anon. These groups have local chapters throughout the country which are usually listed in the phone book.

Growing Together

"It's Just Like Being A
Friend"

Education,

Awareness,

Understanding

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PLAIN TALK ABOUT ALCOHOL

Appendix F

Outreach Activity: Peer Listener Training

Introduction

The Peer Listener Training Program is designed to train local residents with basic knowledge to provide help to the disaster-impacted communities. The lay listener acts as an advisor, friend, and referral agent for individuals within a community that may not desire to seek professional services, or may not know that help is available. The resource provided is the Peer Listener Training Manual.

Community leaders should consider the following:

- Peer Listener Training should be conducted by qualified local mental health professionals when possible, or non-local mental health professionals when necessary.
- Peer Listeners should be individuals within a community who are highly trusted, dependable, and discreet resident volunteers. They should be representative of all cultural, ethnic, and age groups within the impact community.
- Peer Listener Training should be organized for two consecutive days or two successive Saturdays. A sample of the two-day schedule is provided in the Manual.
- Community leaders should continually follow-up with peer listeners to receive feedback and provide additional training and referral organizations when required.
- Local mental health professionals and community support organizations may be an excellent resource to supplement certain training sessions.

The Peer Listener Training Manual is a resource that each trained listener will be able to refer back to, upon training completion. The manual contains information on:

- 1) Disasters and Mental Health
- 2) Communication Skills
- 3) Dealing with Anger
- 4) Common Concerns
- 5) Support Seeking

The training and the manual are designed, not only for volunteers, but to provide support and assistance to peer listeners themselves. Peer listeners are after all, part of the impacted community.

PEER LISTENER PROGRAM

Introduction

During the past six years, the Cordova community has undergone a prolonged recovery from the Exxon Valdez Oil Spill. While in the short term, ecological and economic concerns were most prevalent, over time, there have been more diffuse effects on the community, with the loss of the economic base. Joblessness and extended litigation have led to anger, depression, alienation, and a loss of trust. With these emotions, has come an increase in job problems, family problems, and personal problems.

Research on rural communities and disaster-effects has shown that many of the people who are effected by disasters are reluctant to use traditional mental health services, particularly when the disaster is man-made. Furthermore, traditional mental health services may not be effective at dealing with the long-term effects of disaster. One of the alternative treatments that has been found to be effective is peer counseling. Peer networks have been established in other communities to help community and individual recovery.

Peer listeners can provide a number of services to the community. Through special training in listening skills, anger management, depression, and other family problems, peer listeners have a unique opportunity to assist their family and friends with ongoing concerns. A peer listener may merely serve as an available ear or may assist in problem solving, or referral to more formal sources of support. Talking with someone who truly knows you and your community can be beneficial in helping an individual feel understood.

Since peer counselors are members of the community, they are more likely to be trusted and truly do have a greater understanding of the effects of the disaster. In addition, peer counselors know the people in the community who are in need, as well as the community resources which are available. By combining these individuals with training in crisis intervention and counseling, they are highly suited to intervening on a number of levels.

In other communities, peer listeners have served a number of functions. They may work with local church or community groups as a resource for persons in need. Or they may work directly with mental health agencies as additional sources of support. Finally, they may be available informally to family and friends, as someone who will listen and may be able to offer some direction.

The current proposed Peer Listener Training Program is designed to train individuals from the high-risk group, that is, the fishing community. Through local advertising in the newspaper, shops, scanner, etc., interested

individuals will be recruited. After a screening by a mental health professional, potential Listeners will participate in a two-day training session. Ongoing supervision and support will be provided through community agencies and the program directors. Follow-up training will be provided approximately six weeks after the initial training, and then again, three months later. While intended to deal with the long-term effects of the oil spill, this network will remain in the community as an ongoing resource. In addition, the network would be in place and available should future disasters affect the community.

Overview of the program

Day One

Session I: The first portion of training will review the purpose of the peer listener program and the intended mechanisms of action. It is foreseen that peer counselors will be available through local agencies, as well as individually seeking out people in need. Ideally, a local agency would allow peer counselors to be technically housed there on a scheduled basis, so that community members would know how, when and where they could meet with a peer listener. While peer listeners will be asked to make an initial time commitment, the program is entirely voluntary.

During the first session, we will overview the short and long-term effects of disasters, particularly technological disasters. In particular, the emotional effects, such as ongoing intrusive symptoms, depression, alienation, family problems, etc. Information regarding the actual effects on the Cordova community will be presented based on past and present research by Dr. Picou and his associates.

Session II. Due to the interpersonal nature of the training, activities to increase people's comfort in talking about and listening to sensitive issues will be conducted. Listener trainees will be encouraged to talk about their own experiences since the oil spill and their perceptions of the changes in the community, as well as the areas/people in need of intervention.

Session III. Listeners will be provided training in empathic listening and communication. While many people are "naturally" good listeners, there are specific skills involved in listening to people in need in such a way that the person feels helped. For example, while people may ask for advice, that is rarely what they are interested in receiving. Active listening involves listening with understanding, while allowing the individual to figure out for themselves how to solve their problem. Peer Listeners will be trained in nonverbal aspects of communication, active listening, and how to respond to people.

Session IV: A common after-effect of technological disasters is anger. While anger towards the actual entities involved in the disaster is certainly justified, often this anger spills over into other relationships, or even worse, into a general anger and lack of distrust towards everyone. Peer listeners will be provided education regarding the proper management of anger. Rather than just saying, “you shouldn’t be angry” or “you need to get over it” peer counselors will be trained to help de-escalate excessive anger, while helping individual to channel their anger in a productive manner.

DAY TWO

Session I: Many of the long-term effects of disaster, involve exacerbation of typical problems in living, such as marital problems, substance abuse, etc. Session I will focus on educating Peer Listeners regarding these issues.

Often anger and depression bring up marital problems and increased family conflict. Common marital problems, as well as suggestions for ways families and couples can manage together better will be discussed. Community resources for these problems will also be discussed.

Angry, depressed parents make for angry, depressed children. Common childhood behavioral and emotional problems will be discussed. Strategies for dealing with conduct problems, sexuality, childhood depression, or other problems will be presented.

Family stress can also lead to domestic violence or child abuse. Signs of these problems will be discussed, as well as the effects. While these problems will generally require more formal interventions, peer counselors will be trained to help identify and encourage further treatment.

Individual problems which develop following disasters include substance abuse and depression. Peer counselors will be educated regarding the signs and symptoms of substance abuse and depression. They will be taught how to recognize a serious problem, form a short-term reaction to stress. Ways to handle crisis situations, such as a suicidal individual, will also be taught. Again, helping the individual to accept and access further treatment will be a function of the peer counselor, when necessary.

Session II: During times of stress, social isolation is a frequent, maladaptive reaction. Peer listeners will be educated regarding the benefits of social support and the ways in which individuals can best be supportive to people in need. One of the functions of the peer listeners will be to serve as an additional community mechanism for social support. At the same time, the peer listeners will help individuals to better use their own networks of social support.

An overview of community resources for support will also be done, with information regarding key concepts. Peer listeners will be provided training to know when they should recommend an individual seek help at a formal agency, rather than relying on the Peer Listener network.

GROWING TOGETHER

PEER LISTENER TRAINING PROGRAM

February 6, 1996

8:30 - 9:00 Registration, Coffee/Donuts

Session I

9:00 - 9:30 Introduction Dr. Steve Picou

Overview of goals of program

9:30 - 10:45 Review of Disaster research Dr. Picou &
- sociological studies Dr. Kati Arata
- mental health effects

- Review of EVOS impacts Dr. Picou
& Discussion

-- 15 minute break --

Session II

11:00 - 12:00 Communication Skills Dr. Arata

A. Nonverbal Issues

-- Lunch --

Session II (cont.)

1:30 - 2:30 Communication Skills Dr. Arata

B. Active Listening
C. Responses

-- 15 minute break --

2:45 - 4:00 Dealing with Anger Dr. Arata

A. What is anger?
B. Anger & Disasters
C. Anger & Blame
D. Listening to Anger
E. Managing Anger
F. Changing Perceptions

4:00 - 4:30 Questions/Discussion

GROWING TOGETHER

PEER LISTENER TRAINING PROGRAM

February 7, 1996

8:30 - 9:00 Coffee/Donuts

Session IV

9:00 - 10:15 Common Concerns Dr. Arata

- A. Marital and Family Issues
- B. Abuse

-- 15 minute break --

10:30 - 12:00 Common Concerns cont. Dr. Arata

- C. Depression
- D. Substance Abuse

-- Lunch --

Session V

1:30 - 3:00 Support Seeking Drs. Arata,
Picou, &
Sound
Alternatives

- A. Providing Support
- B. Informal Support
- C. Formal Sources of Support staff

-- 15 minute break --

3:15 - 4:00 D. Peer Listener Network

- 1. Confidentiality
- 2. Supervision
- 3. Referral

4:00 - 4:30 Questions/Discussion

Peer Listener Training Manual

- I. Disasters and Mental Health
- II. Communication Skills
- III. Dealing with Anger
- IV. Common Concerns
- V. Support Seeking

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Children and Trauma. Cynthia Monahan

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PEER LISTENER
TRAINING

SESSION I

DISASTERS
AND
MENTAL HEALTH

DISASTERS AND MENTAL HEALTH

I. History of Disaster Research

A. Original studies

B. Types of Disasters

II. Stages of Response

III. Psychological Effects

A. Short-term effects

B. Long Term effects

1. PTSD

2. Research

C. Factors Affecting recovery

D. Phases of Psychological Recovery

E. Children & Elderly

IV. Denial and Resistance

V. Exxon Valdez Oil Spill

A. 1989 Data

B. 1992 Data

C. 1995 Data

DISASTER: *an event with a relatively sudden and identifiable onset that is caused by external or environmental factors and is associated with adverse effects on a group of individuals*

DISASTER RESEARCH

Original Studies

Coconut Grove nightclub fire in Boston (1944)

- Lindeman describes emotional reactions and a "disaster syndrome" consisting of flashbacks, survivor guilt, anger & hostility, a compulsive need to talk about the trauma, and obsessive thoughts and compulsive behaviors

Buffalo Creek Flood (1972)

- 4000 of the communities' 5000 houses were destroyed
- people relocated to trailers, lost support systems
- 90% had lasting psychological symptoms two years after the flood

Mount St. Helens (1980)

- tenfold increase in depression, anxiety, and PTSD symptoms long-term

Three Mile Island (1979)

- even though no actual harm to individuals, significant, long-term increase in rates of depression, anxiety, hostility, and somatization

No Long Term Effects?

- a number of researchers have suggested that disasters typically produce only transitory effects and few will develop ongoing psychological problems as a result of a single disaster, however, as the above studies demonstrate, long-term effects are found

Types of Disasters

Natural Disasters

- floods, earthquakes, hurricanes
- may involve some warning time
- "low point" during worst part of disaster
- loss of life and property
- blame extends from God to man; often most anger associated with recovery and agencies involved
- research demonstrates usual positive community response in the aftermath with community bonding in efforts to rebuild
- primarily short-term psychological effects

"Human-caused" Disasters

Examples: Chernobyl, Exxon Valdez Oil Spill

- rarely a "low point"
- degree of victimization and harm hard to perceive
- suffering often not acknowledged
- long-term effects more common

Stages of Response

Predisaster Preparation

- reduce vulnerability to disaster through building codes, regulations, etc.
- public education on disaster preparedness
- drills with public safety/health workers
- warnings of imminent disasters (people tend to underestimate likelihood of disaster, even when given warning)

Disaster Response

- immediate response to disaster
- evacuation, search & rescue, care of injured persons, restoration of public order
- development of "therapeutic community"
 - heightened sense of altruism, goodwill towards others, working together
- majority of people cope well during the actual crisis, helping one another, minimal severe psychological reactions

Postdisaster Recovery

- media coverage influences relief
- community agencies provide existing services and expand services to deal with disaster
- new agencies develop to deal with new issues
- stress levels increase due to increased demands, change in routines
- individuals become frustrated with relief agencies; decentralization causes agencies to not know where to direct aid
- relief and aid often don't match the greatest need
- despite aid and relief, most individual have increased debt
- individuals resist being in victim role, avoid dependency
- "hidden" stressors: temporary housing, loss of leisure time, children out of school and underfoot, need to talk about disaster, lack of good information, resistance to seeking treatment

Psychological Effects

Short-term Psychological Effects

- little systematic research on immediate short-term effects due to their assumed transient nature
- "acute stress disorder" with dissociation, numbing, reduced awareness, re-experiencing, anxiety, avoidance, and arousal
- sleep difficulties, irritability, and difficulty concentrating are common short-term effects

Long-term Psychological Effects

Post-Traumatic Stress Disorder

Re-experiencing:

- recurrent, intrusive memories
- nightmares
- flashbacks
- intense distress when reminded of the event
- physiological reactions to reminders

Avoidance:

- avoid thoughts, feelings, etc. about trauma
- avoid reminders of the trauma
- loss of memory for events related to the trauma
- decreased interest in activities
- feelings of detachment from others
- restricted feelings
- sense of foreshortened future, pessimistic outlook

Arousal:

- sleep difficulties
- irritability, anger
- difficulty concentrating
- hyper vigilance
- easily startled

Research on Long-term effects

- (Mount St. Helens) 11% of highly exposed men and 21% of highly exposed women were diagnosed with depression, anxiety disorders, or PTSD during the two years following the eruption
- (Puerto Rico floods) increased diagnoses of depression, generalized anxiety disorders, and PTSD, greater use of health care services
- (Buffalo Creek) 44% with probable PTSD 2 years after the dam collapse; 28% current PTSD 14 years after collapse
- decrease in all types of symptoms over the first several years post-disaster; symptom persistence beyond two-years primarily associated with man-made disasters
- relationship problems, somatic complaints, and increased visits to medical and mental health facilities also found as long-term effects
- decreased trust, suspiciousness and anger; sense of loss of control

Factors Affecting Recovery

- individual's personal experiences in the disaster (contact with dead bodies, personal loss)
- resource loss (shelter, food, money, sense of control, trust in others, role identifications)
- individual's prior level of mental functioning
- disasters not associated with a single community (plane crash, train wreck)
- degree to which one has to rebuild life
- type of disaster
- demographics (lower incomes & larger families associated with more emotional problems; women found to have more symptoms than men; age; marital status)
- speed of onset of disaster

Phases of Psychological Recovery

- 1) Heroic Phase – emotions strong, altruistic reactions
- 2) Honeymoon Phase (3 – 6 months) – victims show energy and optimism in reconstructing lives based on promises and help from different agencies
- 3) Disillusionment Phase (1 month to 1-2 years) – victims deal with frustration of failed help
- 4) Reconstruction Phase – individuals rebuild their own lives and community

Special Populations

Children

- the majority of disaster research on children demonstrates that children's reactions are influenced by their parents' reactions....if parents are severely distressed, children can be expected to have similar symptoms
- children also have direct effects from the disaster
- parents and teachers often underestimate the degree of stress experienced by children
- typical problems include regressive behavior, fears, sleep problems, repetitive play, nightmares, intrusive symptoms during "quiet" times
- girls tend to show more psychopathology than boys
- symptoms related to degree of morbidity and/or perceived threat

Age differences:

Preschool age - repetitive play & drawings; crying, thumb sucking, fears, irritability

Elementary age - headaches, physical complaints; depression, fears, confusions, poor concentration, decreased school performance; fighting and/or withdrawal from peers

Adolescent - headaches, physical complaints; depression, confusion; poor performance; withdrawal and isolation; aggressive and/or rebellious behaviors

Elderly

Vulnerabilities

- poor physical health
- isolation
- fixed income
- higher rates of preexisting mental disorders

Strengths

- prior experience with disasters
- "lifetime" perspective

Research findings

- elderly often more resilient, less anxious post-disaster
- more concerned with loss of exterior items and house\damage, whereas younger individuals more concerned with loss of personal belongings
- less use of insurance, and more positive ratings of emotional and physical health than younger individuals

Denial and Resistance

- not all individuals will have psychological problems following disasters
- denial can be a sign of avoidance or an accurate self-perception
- denial more likely to be associated with avoidance and some evidence of intrusion or increased arousal
- others less likely to see psychological distress as legitimate if little personal damage
- others less likely to see psychological treatment as needed if little personal damage
- many individuals avoiding treatment may do so because it serves as a reminder of the tragedy
- many people will participate in initial mental health services following a disaster, but over time, decreased rate of participation in interventions is typical
- persons avoiding mental health services may seek out informal contacts with mental health providers
- nonparticipants in post-disaster mental health had higher initial rates of PTSD, with avoidance symptoms

PEER LISTENER TRAINING

SESSION II

COMMUNICATION SKILLS

COMMUNICATION SKILLS

- I. What's so great about listening?
- II. Verbal and nonverbal expressions
 - A. Nonverbal issues
 - B. Verbal Prompts
- III. Common Response Styles
- IV. Summary Suggestions for Communication

SESSION II

COMMUNICATION SKILLS

What's so great about listening?

While many people use the terms peer counselor and peer listener interchangeably, we chose the term peer listener for your role to emphasize the importance of **listening** over counseling. While certainly part of your role is to help people, in this next session we will be discussing how listening is the therapist/counselor's best tool.

The greatest temptation for most of us is to become anxious about "straightening people out, fixing them up, and sending them in the right direction." Even though new directions and changes in your own life have probably come about only after thoughtful reflection and struggle, we somehow assume that expediency is required when we are attempting to help others. We pressure ourselves to fix people fast, and to do that, we need to collect from the experts the right opinions, the right theories, the right questions, the right answers, and the right problem-solving techniques. Two of the cornerstone philosophies of counseling to remember is that "there are no quick fixes," and to keep in mind the goal of "understanding, not changing."

While theories and techniques are useful, active listening is one of the best tools of the therapist. Further, listening is itself a philosophical and theoretical approach, with specific techniques of listening to and reflecting back feelings. The problems with theories and techniques arise when, in our anxiety to do something to people to make them different, we become side-tracked into focusing on problems instead of people. The solution, then, becomes the goal of our interchange, rather than focusing on the issues and their meaning for the individual.

People who seek out peer listeners will most likely be seeking out some sort of change. While the urge will be to solve their problem, listening will serve to help you understand them and to help them understand themselves. We've all had the experience of going to someone for advice and coming up with a solution as soon as we verbalized the problem. Most of us need a sounding board at some time or another. Furthermore, sometimes the problem that someone chooses to present is not really the problem, in other words, you have to learn to hear what they are not saying.

If in listening to your peers, you can, with caring and empathy, reflect back to them their feelings and decode for them their messages, they will begin to see their situation more clearly and hear the messages from their own hearts. If you can listen in an accepting and non-judgmental manner, you provide for them a safe environment in which they can explore other sides of themselves which they may not have explored alone. And further,

by listening and accepting, you allow them to find the strength within themselves to develop the best solution for their problem.

Communication connects people. We need to feel that whoever listens to us is nonjudgmental, empathetic, and compassionate. We need to feel that the listener is focused completely on our dialogue. In this connection between speaker and listener, we need to feel trust and safety.

In this section on communication, you will learn about verbal and nonverbal ways of expressing yourself. Second, we will discuss active listening through attending, following, and reflecting skills: recognizing feelings expressed and reflecting those back to the speaker. Finally, we will analyze differing conversational response styles. As speakers, how can you best communicate your ideas in a positive, nonthreatening manner? As listeners, how can you make the speaker feel at ease and affirmed?

In any crisis situation, communicating our feelings to another is an important step to healing and coping. In fact, research has shown that people who are able to talk about their problems in a trusting situation have fewer physical and emotional symptoms. Effective communication can break barriers and open channels of hope. We all need a sense of inclusion, respect, and acknowledgement -- particularly in difficult times. As you learn to listen actively and speak clearly, you create important links in the helping and healing process.

VERBAL AND NONVERBAL EXPRESSIONS

Nonverbal issues:

Eliminate Noise

1) The physical environment

- Quiet, private setting
- Be sensitive to distractions in the setting or individual distractions
- Be aware of body language

2) Communicating Comfortably

- respect personal boundaries
- 0 to 18 inches (intimate distance)
- up to 4 feet (personal distance)
- up to 12 feet (social distance)
- greater than 12 feet (public distance)

3) Negative body language

- emotional cues
- be careful of your own body language, as well as the message being sent by the other person
- cold or clammy hands (anxiety)
- tightened jaw (anger, opposition)
- arms folded across chest (anger, opposition, or anxiety)
- side view (anxiety, opposition, lack of trust)
- intense eye contact (anger)
- perspiring or shallow breathing (anxiety)
- tightened muscles (anger, anxiety)
- hunched shoulders (depression, helplessness)
- clenched fists (anger)
- altering interpersonal distance (anxiety)

4) Negative body language - signs of boredom

- foot jiggling
- leg swinging
- finger tapping
- yawning
- gum chewing
- smoking
- eating
- knuckle cracking
- cleaning nails
- playing with hair
- handling objects
- reading
- watching TV
- shifting positions
- nodding off

5) Distracting body language

- lint picking
- rummaging through things
- scratching
- playing with clothing, hair, or other objects
- interrupting
- tapping fingers, pencil
- clicking pens
- rhythmic movement of body parts
- sniffing
- eating; drinking
- smoking

6) Internal distracters

- state of mind
- self-esteem
- worries
- fears
- feelings of inadequacy
- feelings of superiority
- nervous feelings

7) Social distracters

- prejudices
- relationship with receiver
- religious beliefs
- cultural traditions
- ethnic priorities

VERBAL PROMPTS

Levels of Communication

Level I: "Small talk", informal conversation, ("It sure has been cold lately"); serves purpose of breaking the ice, establishing a mutual interest on an equalizing topic

Level II: Catharsis - venting feelings, sharing problems, frustrations; someone with an intense need or who is expressing emotions needs a listener with empathy who will "just listen" --nod, say "I see," and not jump in with advice or criticism

Level III: Exchange of information - provide information or "advice," help solve a problem

Level IV: Persuasion - trying to influence someone, alter their emotions or plan of action

1) Following Skills

- door openers
- minimal encouragers
- infrequent questions
- attentive silence

2) Door openers and encouragers active listening

- "break the ice" with conversational small talk transition phrases
 - feeders, paraphrase, reflect feelings, summarize
 - "I see," "uh huh," "I know what you mean" (let listener know that you are attending and understand)

3) Reflecting and prompting questions

- Rephrase the message to clarify and insure understanding; encourage person to express their own feelings, before giving labels to emotions
- Use open questions, avoid "yes - no" questions
 - "did that make you angry?"
 - vs.
 - "how did that make you feel?"
- Limit "why?" questions, leads to defensiveness
- Avoid loaded questions
 - "Don't you think most families have prepared for crises?"

4) Exploring alternatives and resources or, how to not give advice

5) Recognizing feelings

COMMON RESPONSE STYLES

1) Evaluating/Advising

- makes a judgment about the relative goodness, appropriateness, effectiveness, or rightness of the sender's problem
- is the most frequently used response
- implies what the sender ought or should do

Impact on sender:

- feel threatened and defensive
- feel listener assumes their judgment is superior
- reinforces feelings of inferiority and low self-worth

General rule: avoid in early stages, always use with caution

2) Interpreting/Analyzing

- communicates intentions to tell sender the real meaning of the problem
- tells sender how the sender feels about the situation; gives psychological insight to the sender
- intends to point out some hidden reason that makes the sender behave as he/she does

Impact on sender:

- feel defensive and afraid that future thoughts and feelings will be analyzed
- better if you lead them towards finding their own interpretations

General rule: avoid in early stages, spend more time listening

3) Supporting/Reassuring

- indicates listeners concern for the sender's feelings
- can communicate a lack of understanding

Impact on sender:

- may be received as support
- may be received as a lack of understanding, or criticism of feelings, "you should not feel as you do"

General rule: do not provide false reassurance, do reassure your availability to help

4) Probing/Questioning

- reflects a desire for more information to understand the problem better
- can encourage or discourage further communication

Impact on sender:

- open questions encourage people to share more thoughts and feelings, and encourage greater self-exploration

General rule: ask open questions, but avoid "why"

5) Understanding/Paraphrasing

- indicates and intent to understand the sender's thoughts and feelings
- paraphrases what the sender has said in the receiver's own words

Impact on sender:

- lets sender know that you have hear them and are actively trying to understand
- lets sender hear their own thoughts and feelings for further clarification, understanding

General rule: use frequently

EXAMPLES OF RESPONSE TYPES

Evaluative responses

I think what you should do is.....
You shouldn't get so upset about....
You should learn to
You're not thinking straight.
You're acting foolishly.

Interpretive responses

What's wrong with you is....
Your problem is.....
You believe that....
The reason you're saying that is....
You're thinking that way because

Supportive responses

You'll feel better.
It's not so bad.
Give him a chance, he'll come around.
Things could be worse.
Don't give up.

Probing responses

Why do you think that's so?
Why do you feel so..?
Why didn't you?
What kind of a plan do you have to...?
How do you feel when..?

Understanding responses

You're so upset about ...
Sometimes you're so angry you feel like....
When you feel __ it is difficult to
You're really down
You feel happiest when...

SUMMARY SUGGESTIONS FOR COMMUNICATION

- 1. Stop talking.** You can't listen while you are talking.
- 2. Get rid of distractions.** Avoid "fiddling" with things. Get away from unnecessary noise such as TV or radio. Make your surroundings as free of distractions as possible.
- 3. Be interested and show it.** Genuine concern and a lively curiosity encourage others to speak freely. Interest also sharpens your attention and builds on itself.
- 4. Tune in to the other person.** Try to understand his or her viewpoint, assumptions, needs, and system of beliefs.
- 5. Concentrate on the message.** Focus your attention on the person's ideas and feelings related to the subject. Listen to how it is said. The persons' attitudes and emotional reactions may express as much or more meaning than the words that are spoken.

Try to keep your personal feelings or biases about the individual from influencing what he/she is trying to say in this instance.

- 6. Look for the main ideas.** Avoid being distracted by details. Focus on the key issue. You may have to dig to find it.
- 7. Watch for feelings.** Often people talk to "get something off their chests." Feelings, not facts, may be the main message.
- 8. Remember that you will be interpreting the person's feelings and statements based on your experience, values, viewpoint, and prejudices. Our convictions and emotions filter--even distort--what we hear. Be sure to give feedback and check out what you think the speaker means and wants.**
- 9. Look at the other person.** Let him/her know that you are listening. Maintain eye contact. Smile, nod or grunt as appropriate. This signals the speaker that you are with them.
- 10. Notice non-verbal language.** The face, the eyes, the hands all help to convey messages. A shrug, a smile, a nervous laugh, gestures, facial expressions and body positions speak volumes. Start to read them. And be sure to check out your interpretation of these non-verbal messages just as you do the verbal ones.
- 11. Hold your fire.** Avoid hasty judgment. Don't jump to conclusions regarding the situation or what the person wants. Hear the speaker out. Plan your response only after you are certain that you've gotten the whole message.

12. Give the other person the benefit of a doubt. We often enter conversations with our minds already made up, at least partially, on the basis of past experience. Prejudgments can shut out new messages.

13. Get feedback. Make certain you're really listening. Ask a question. Confirm with the speaker what he or she actually said.

14. Leave your personal emotions aside. Try to keep your unrelated worries, fears or problems out of the situation. They will prevent you from empathizing and listening well.

15. Share responsibility for communication. You, the listener, have an important role. When you don't understand, ask for clarification. Don't give up too soon or interrupt needlessly. Give the speaker time to express what he/she has to say.

16. Work at listening. Hearing is passive; our nervous system does the work. Listening is active; it takes mental effort and attention

PEER LISTENER
TRAINING

SESSION III

DEALING WITH ANGER

*"For he who gives no fuel to
fire puts it out, and likewise
he who does not in the
beginning nurse his wrath
and does not puff himself up
with anger takes precautions
against it and destroys it"*

- Plutarch

DEALING WITH ANGER

- I. What is anger?
- II. Anger and disasters
- III. Anger & Blame
- IV. Listening to anger
- V. Managing Anger
- VI. Changing Perceptions

an-ger (ang'ger) n. 1. A feeling of extreme displeasure, hostility, indignation, or exasperation toward someone, or something; rage; wrath; ire. 2. Obs. Trouble; pain; affliction.

Synonyms: anger, rage, fury, ire, wrath, resentment, indignation. These nouns denote degrees of marked displeasure. **Anger**, the most general, denotes strong, usually temporary displeasure without specifying manner of expression. **Rage** and **fury** are closely related in the sense of intense, uncontained, explosive emotion. **Fury** can be more destructive, **rage** more justified by circumstances. **Ire** is a poetic term for anger. **Wrath** applies especially to fervid anger that seeks vengeance or punishment on an epic scale. **Resentment** refers to ill will and suppressed anger generated by a sense of grievance. One feels **indignation** at seeing the mistreatment of someone or something dear and worthy.

-Webster's

I. What is Anger

1. Review definition

2. Look at definition in terms of EVOS

- Anger - unpleasant, but manageable emotion
- Rage/fury - uncontrolled, damaging, excessive, though justified
- Wrath - uncontrolled, seeking revenge
- Resentment - feelings of mistreatment, unfairness
- Indignation - anger for others

3. When is anger justified?

Whenever you feel it; anger is an emotion that is neither right or wrong, but rather an expression of your feelings. Feelings are not wrong, whereas how one expresses feelings can be destructive.

4. Why not feel angry?

Look at costs and benefits of anger and behavior; anger can be positive, but it can also be negative and self destructive

ANGER'S POSITIVE FUNCTIONS

Anger is an energizer. It gives us vigor, mobilizes the body's resources for self-defense, and provides us with stamina when a task gets difficult. It enables us to deal with conflict by supplying the fuel for the fight.

Anger can be helpful in expressing tension and communicating our negative feelings to others. The productive expression of anger is an important way to resolve conflict.

Anger gives us information about people and situations. It serves as a cue to tell us that there is something unjust, frustrating, threatening, or annoying going on. It can be a signal that tells us that it is time to cope with the distress.

Anger arousal can lead to a feeling of control. When a situation is getting out of hand, converting anger arousal into energy enables us to take charge and assert our will or interest.

ANGER'S NEGATIVE FUNCTIONS

Anger can disrupt our thoughts and actions. When angry, it is harder to think clearly and evaluate options. It causes us to act impulsively without considering consequences of our behavior.

Sometimes anger is a way to defend ourselves when it is not necessary. When we get hurt or embarrassed, we can get angry as a way to protect our pride. It is easier to be angry than to be anxious. Anger used like this prevents us from recognizing our feelings and ourselves.

Anger can instigate or lead to aggression. When we become emotionally upset, we sometimes discharge or release our feelings through our behavior – when we get angry and then try to take it out on something or someone.

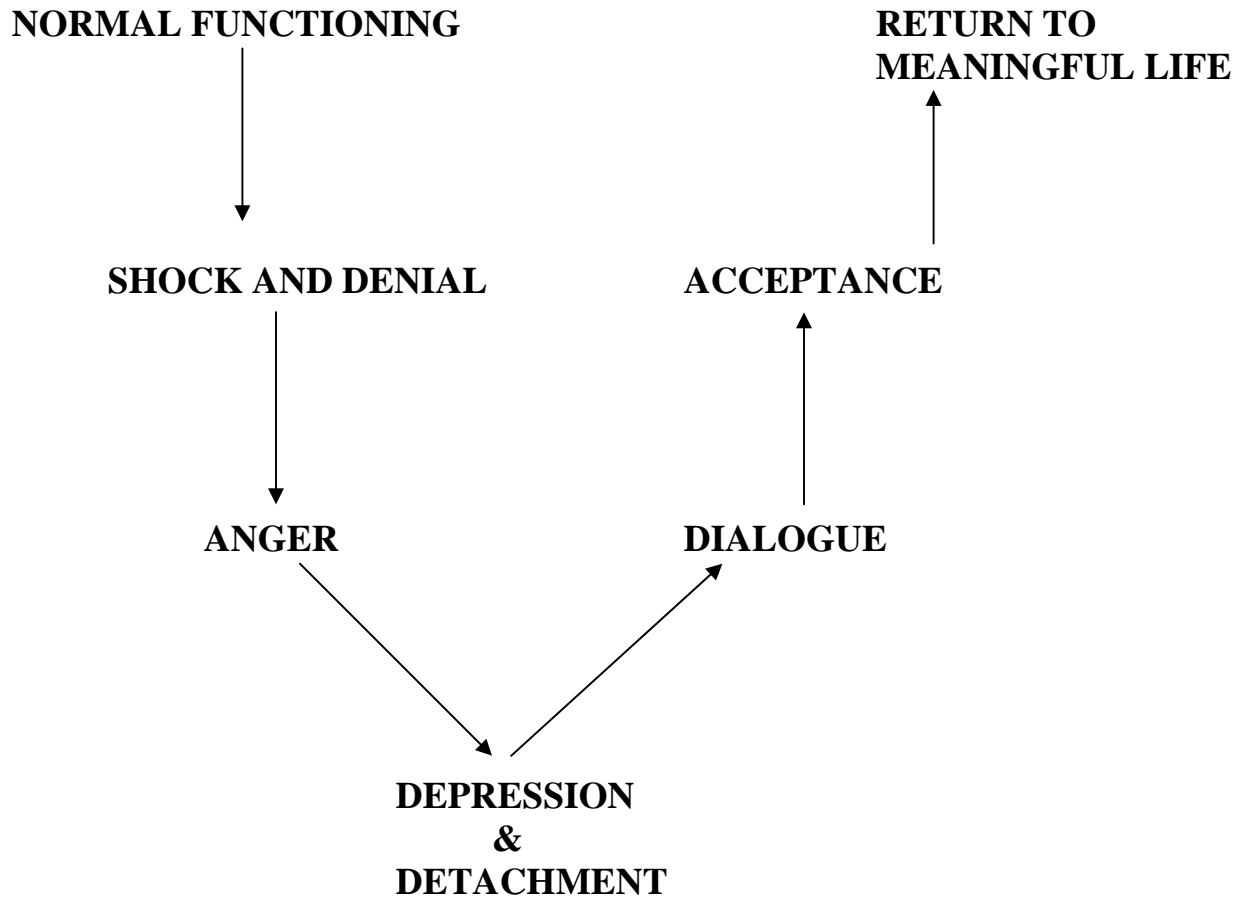
ANGER AND DISASTERS

Following any type of disaster, anger is one of the most common emotional reactions. In particular, following a technological disaster, such as the Exxon Valdez oil spill, anger is nearly universally experienced by those affected.

Research regarding long-term effects of disasters shows that years after the disaster, individuals are often angry with the government or other institutions for their management of the post-disaster phase. In other words, even no one is to blame for the disaster, others may be held responsible for how they responded to the disaster. Similarly, when the organization responsible for a disaster attempts to make some type of restitution or aid in recovery, it is often met with further anger.

Understanding anger following a disaster is much like understanding the grief response as disasters, even without loss of human life, represent significant loss to individuals with subsequent grief.

STAGES OF THE LOSS CYCLE



ANGER AND BLAME

1. Blaming is an effort to understand and control.

The act of blaming may stem from a need to understand a difficult situation. Somehow it's worse to feel that the world has gone topsy-turvy for no reason than it is to point fingers at the "cause" of the problem. Blaming give us a sense of control over what has happened.

2. Who do you blame?

When bad things happen to others, we tend to blame them for the things that are happening; this is known as "blaming the victim" and is explained by our need to feel that things happen for a reason. When bad things happen to us we can blame ourselves or blame others; blaming yourself often leads to depression, blaming others results in anger which can lead to other destructive behaviors.

3. But what if somebody is to blame?

Just as anger is often justified, so is blame. People will sometimes do things that hurt us intentionally or unintentionally. At the same time, many times people "get away" with their behavior; that is, they are not adequately punished and/or remorseful. Part of working through anger and blame is to let go of justified feelings; not because the source of anger has been vindicated, but because we no longer want to let anger control our lives and create greater harm.

4. Why is everybody blaming each other?

When the people to blame are unreachable or there is nobody to blame, we often displace our anger on each other. In particular, it is easiest to take frustration out on those who are closest to us. While you don't blame your spouse or partner for the oil spill, you may get angry over some minor financial decision, which was made harder by the spill.

catharsis 1. Med. Purgation, esp. for the digestive system. 2. A purifying or figurative cleansing or release of the emotions or of tension, esp. through art.

abreact To release (repressed emotions) by acting out, such as in words, action or the imagination, the situation causing the conflict

**I WAS ANGRY WITH MY FRIEND;
I TOLD MY WRATH,
MY WRATH DID END.
I WAS ANGRY WITH MY FOE;
I TOLD IT NOT,
MY WRATH DID GROW.**

-- WILLIAM BLAKE

LISTENING TO ANGER

1. **Use active listening**, in particular, empathy, reflection, summarizing.
2. **Empathy** - listen for understanding, try to imagine how that person is feeling and why they feel justified in that feeling.
3. **Reflection** - communicate your understanding through non-verbal gestures, encouragers, and paraphrasing.
4. **Summarizing** - reflect back to the individual your understanding of what they are saying
 - What I hear you really saying is...
 - It seems to me what you're saying is...
 - The real meaning behind what your saying is...
 - The important points seem to be...
5. **DON'T LIST**

WHAT NOT TO SAY

- I know how you feel.
- You shouldn't feel that way.
- It was God's will.
- You've got to get on with your life.
- You've got to be strong.
- You should be over that by now.
- You're so lucky to still have
- Good will come out of it.
- Just turn it over to God.
- You're not handling it right.
- Time heals all wounds.
- You'll get over it.
- You shouldn't talk (think) about it.
- Why didn't you.....?
- Anything else that implies guilt or blame.

MANAGING ANGER

PROBLEM SOLVING

1. Identify the problem.

Be specific, giving attention to as many aspects of the problem as possible. "A problem well-defined is half-solved." It may also help to separate this problem from your feelings about it. Conflict may result from feelings associated with a particular issue, rather than the issue itself. It is also important to avoid offering solutions immediately. Suggesting solutions at this point can prevent accurate identification of the problem. Ask the following questions:

- Are we stating the real problem?
- How do we know it is a problem?
- Is this situation a problem or is it our reactions to the situation that makes it a problem?
- Is there more than one problem?
- Why is it a problem?
- If nothing is done, what will happen?

2. Who is involved.

Who is part of the problem and, perhaps, the solution? Who is affected by the problem? List everyone involved and then identify the main characters.

3. Examine your values related to the problem.

What are some of your and the others needs and concerns related to the issue at hand? Why are they so important? Which are most important? This step helps to clarify the problem. It also brings out differences and similarities of interests between persons involved.

4. Brainstorm for solutions.

Identify as many ideas as possible, without evaluating their "goodness;" include irrational or silly solutions.

5. Weigh the pros and cons of each solution.

6. Choose a solution you can live with.

7. Evaluate success or brainstorm new solutions.

GUIDELINES FOR MANAGING ANGER

CALM DOWN: *Take a deep breath, go on a short walk, give yourself time to think.*

FIND A GOOD TIME AND PLACE TO TALK: Choose a time with little distractions from others. Avoid times when you or the other party is tired or highly stressed.

KEEP A POSITIVE ATTITUDE AND AN OPEN MIND: Things are not always the way you think they are.

BE A GOOD LISTENER: Listen and take time to “hear” what others are saying.

USE "I" MESSAGES: Use “I” messages to express needs and wants to reduce defensiveness, and feelings of blame.

Examples: YOU DON'T TALK TO ME ENOUGH.

I FEEL DISTANT FROM YOU WHEN WE DON'T TALK.

Sample: I feel _____
when _____
because _____
and I want _____

WRITE AN “ANGER” LETTER

CHANGING PERCEPTIONS

Anger is a function not only of actions that occur, but also our **reactions** to what has happened to us. We can not control what happens, but we can control how we choose to think about things. A simple way of remembering this is to examine the ABC's of a situation:

A – antecedent - the event that triggers our emotions

B – behavior - our behavior/thoughts about the event

C – consequences - our emotions

COMMON DISTORTED COGNITIONS

Overpersonalization – I am responsible for all bad things, failures, etc. or things are done intentionally to harm me

Overgeneralization – If it true in one case it applied in any case which is slightly similar.

Awfulizing – Always think of the worst. Its most likely to happen to you.

Black/white thinking – Everything is either one extreme or another; good/bad, etc.

Selective Abstraction – Focus exclusively on the negative and that which validates or confirms your negative emotions.

PEER LISTENER TRAINING

SESSION V

COMMON CONCERNS

COMMON CONCERNS

I. Marital and Family Issues

- A. List of common complaints
- B. "Polite Behaviors" hand-out
- C. Five approaches to conflict
- D. Suggestions for Constructive Conflict
- E. Ways to Strengthen a Family

II. Abuse

- A. Domestic Violence
 - 1. Types of violence
 - 2. Facts on Domestic Violence
 - 3. Characteristics of men who batter
 - 4. Characteristics of the battered women
 - 5. Treatment
- B. Child Abuse
 - 1. Signs of physical abuse
 - 2. Signs of neglect
 - 3. Facts on child sexual abuse
 - 4. Behavioral indicators of sexual abuse
 - 5. Risk factors for abusive parents

COMMON CONCERNS (cont.)

III. Depression

- A. Signs and symptoms
- B. Facts about Depression
- C. Helping the Depressed Person
- D. Facts about Suicide
- E. Common Predictors of Suicide
- F. Warning Signs -- The Red Flags
- G. Assessing Lethality of Suicide Risk
- H. Treatment for Depression

IV. Substance Abuse

- A. Facts about alcoholism
- B. Warning signs of alcohol abuse
- C. Patterns of Alcohol Abuse
- D. Treatment for Substance Abuse

COMMON COMPLAINTS

Spouse is selfish and inconsiderate.

Spouse is not truthful.

Spouse complains too much.

Spouse does not show affection.

Spouse does not talk things over.

Spouse nags me.

Spouse interferes with hobbies.

Spouse does not listen to me.

Spouse never pays attention to me

RULES OF POLITENESS

THE DON'TS OF POLITENESS

Don't say what you can't do or what you don't want to do.

Don't complain or nag.
appreciation.

Don't be selfish.

Don't hog the conversation.

Don't suddenly interrupt.

Don't put your spouse down.

Don't put yourself down.

Don't bring up old resentments.

Don't think only of your own needs and desires.

THE DO'S OF POLITENESS

Say what you **can** do and what you **want** to do.

Give sincere and positive

If you have an issue to resolve, talk it out.

Be courteous and considerate.

Express interest in your spouse's activities; try to listen; ask questions.

Give your spouse a chance to finish speaking.

Say things that you honestly feel and that you think your spouse will like.

Criticize your ideas, not yourself.

Focus on the present situation. If you have an issue, schedule a problem solving session.

Think of your spouse's needs and desires; be empathetic.

SUGGESTIONS FOR CONSTRUCTIVE CONFLICT

1. Focus on the problem

- find out what you are fighting about; after the anger has eased down, evaluate what provoked the conflict

2. Do not violate the dignity and self-respect of the other person(s) involved

- it's alright to be angry but don't drift into name-calling and abusiveness
- never put labels on the other; do not make sweeping, labeling generalizations about their feelings ... especially about the realness or importance of those feelings
- sarcasm is dirty fighting; avoid it

3. Keep to the subject

- be specific when you introduce a gripe
- confine yourself to one issue at a time
- don't drag in irrelevancies, "old" issues, and unrelated grievances; take them up at some other time
- forget the past and stay in the here-and-now; what either of you did last year of month or that morning is not as important as what your are doing and feeling now, and the changes you ask can not possibly be retroactive
- do not overload others with grievances; to do so makes them feel hopeless and suggests that you have either been hoarding complaints or have not thought through what really troubles you

4. **Don't just complain, no matter how specifically; ask for a reasonable change that will relieve the gripe**
5. **Remember that conflict is a two-way process**
 - in points of disagreement in family matters, who is right and who is wrong is irrelevant; everyone is affected anyway
 - what did you contribute to the conflict
 - listen to what the other person is saying...there probably is some truth in it
 - there is never a single winner in an honest conflict; both parties either win more intimacy or both lose
6. **Ask for and give feedback on the major points, to make sure you are heard, to assure your partner that you understand what he/she wants**
7. **Never assume that you know what your partner is thinking until you have check out the assumption in plain language. Also do not assume or predict how he/she will react, what he/she will accept or reject**
8. **Be sensitive to feelings and moods of the other person as well as to his/her thoughts and ideas**
 - people behave both in relation to how they think and to how they feel; in family situations, feelings are of particular importance
 - do not be glib or intolerant; be open to your own feelings and equally open to the other's feelings
 - no one has the right to deny another's perceptions, to argue with another's experiences, to dispute another's feelings, or to disown another's tastes
9. **Go easy with criticism**
 - when things go wrong, it is not the right time to criticize
 - instead of being critical about the other person's behavior, search out the good points and help him/her to develop them

- truth should be tempered with compassion; there is such a thing as too much truth; it is possible to ferret out faults in anyone, but why?
10. **Always consider compromise; remember, your partner's view of reality may be just as real as yours, even though you may differ; there are not many totally objective realities**
 11. **Do not allow counter demands to enter the picture until the original demands are clearly understood and there has been a clear-cut response to them; do not exploit concessions by stepping up your demands**
 12. **Mediate. Take time to consult your real thoughts and feelings before speaking; your surface reactions may mask something deeper and more important; don't be afraid to close your eyes and think**
 13. **Learn to recognize when you are angry “without reason,” and develop some way to work it off**
 14. **Time your battles as carefully as you can.**
 - hurts, grievances, and irritations should be brought up at the very earliest moments
 - keep your quarrels as private as far as you can

WAYS TO STRENGTHEN A FAMILY

I. Appreciation

- “catch them being good” - acknowledge and praise positive behaviors exhibited by family members
- let family know you appreciate them for the things they do
- display affection towards each other
- “strength bombardment” have one family member identify several of their strengths, then have other family members in turn, identify strengths of that person; do this for each family member
- make family members feel special on unexpected moments, not just birthdays, anniversaries or holidays
- treat family members with respect and courtesy; ask don't tell each other to do things, thank each other when something is done, show interest in conversations, compliment each other, and watch for sarcasm and insults

II. Shared Responsibility for Family Planning and Functioning

- parents are not authoritarian, yet the children don't “rule”
- children's opinions are encouraged and acknowledged
- husband and wife treat each other as equal, though each may have more responsibility for different areas
- children involved in decision making as well as planning; children more apt to carry out chore if they had a role in its assignment
- hold weekly family meetings for open discussion of problems, conflicts, etc., alternate who is “in charge” for each meeting

III. Flexibility and Openness to Change

- establish routines and structure, but be flexible to temporary and permanent changing needs
- periodic review of the “rules;” rules should be explicit, clear and understood, reasonable and workable, fair and just, mutually agreed upon, appropriate, up-to-date, and enforceable

V. Communication

- communicate frequently, openly, clearly, and directly
- LISTEN
- express own needs and wants in a clear manner
- resolve conflicts
- find more time to talk to each other
- play communication games (e.g., Endgame)

V. Shared Values

- open expression of values as part of everyday life; talk about opinions and feelings about events in terms of values
- work toward shared values, as well as acceptance of divergence
- establish and maintain family rituals and traditions

VI. Quality Time Together

- make family time a priority, establish a “family night”
- spend pleasant, positive time together

VII. Connections with Others

- strong families also have many connections outside the family
- encourage and support connections with other families, organizations, etc.

ABUSE

DOMESTIC VIOLENCE

Physical violence

- slapping, hitting, kicking, punching, choking, shoving, beating, throwing things, locking out, restraining, and other acts designed to injure, hurt, endanger, or cause physical pain

Emotional abuse

- acts intended to shame, insult, ridicule, embarrass, demean, belittle, or mentally hurt another person; calling names such as fat, lazy, stupid; withholding money, affection, or attention; forbidding someone to work, handle money, see family, etc; threatening to abandon, take children away

Sexual abuse

- forcing someone to have sex when they don't want to; forcing them to engage in sex acts that do not like; forcing them to have sex with others or watch others; forcing reproductive decisions (e.g., abortion) against the individual's desires

Facts on Domestic Violence

- four to five women a day are murdered by a male partner; over thirty percent of women murdered are murdered by an intimate partner
- up to 6 million women are believed to be beaten in their homes each year; up to 90 percent never report the abuse
- one out of every three women treated in emergency rooms is a victim of violence
- up to 75% of battering victims have left or are trying to leave men who will not let them go
- between 25 to 50% of all women in American will be physically abused by a partner at least once in their lives
- more than one-third of pregnant women are abused
- 50 to 70% of men who abuse their female partner also abuse children in the home
- 25 to 33% of men who batter their wives also sexually abuse their children
- battered mothers are more likely to abuse their children, more likely to attempt suicide, and more likely to abuse drugs and alcohol

Characteristics of Men who Batter

- previous involvement with domestic violence
- unemployed
- uses illegal drugs at least once a year
- man and woman are from different religious backgrounds
- man saw his father hit his mother
- couple lives together, but is not married
- blue-collar occupation, if employed
- man did not graduate from high-school
- man between eighteen and thirty years old
- either person uses severe violence toward children in the home
- income below poverty level

Characteristics of the Battered Woman

- research does not identify any "typical" pattern; women of all types get battered
- certain characteristics are associated with women who stay in abusive relationships for long periods:
 - low self-esteem
 - abusive family of origin
 - alcohol or drug abuse
 - passivity in relationships
 - dependency
 - high need for affection, attention, and approval
 - traditional female sex-role

Resources

- batterer should be referred for treatment, individual and group are best
- couples therapy not immediately indicated, may be useful after progress made by the batterer
- victim referral to shelter, if needed; individual counseling for the victim
- children may also need short-term counseling

CHILD PHYSICAL ABUSE & NEGLECT

Signs of Physical Abuse

- extensive bruises
- burns
- bruises in specific shapes, such as handprints
- frequent complaints of soreness or awkward movements
- explanations for injury that are inconsistent
- overcompliance
- withdrawal, perpetual sleepiness
- acting out, aggressive, disruptive behavior
- accident proneness
- fearfulness
- dislike or shrinking of physical contact
- regressiveness, exhibiting less mature behavior

Signs of Neglect

- clothing soiled, or too small
- always seem to be hungry, hoarding or stealing food
- listless and tired
- often report caring for younger siblings even though child is quite young
- poor hygiene - bad breath, dirty teeth, smell of urine
- unattended medical or dental problems
- stealing, vandalism, or other delinquent behaviors
- frequent school absences or tardiness
- withdrawn
- inadequately dressed for the weather
- emaciated

CHILD SEXUAL ABUSE

- retrospective studies with adults indicate that approximately 25% of women and 16% of men report having been sexually abused as a child
- the median age for both boys and girls is 9
- in studies with adults, only one-third told someone about the abuse as a child
- most abuse is perpetrated by family or friends
- physical force is rarely used
- much abuse does not involve intercourse, but involves fondling or oral stimulation

Behavioral Indicators of Sexual Abuse

- Depression
- Withdrawal
- Isolation from peers
- Chronic discipline problems at school, attention-getting behavior
- Increase in physical complaints
- Inappropriate sexual acting-out, sexually seductive behavior
- Sudden drop in school performance
- Sudden change in attitude, personality
- Inappropriate understanding of sexual behavior; sex play with toys, dolls
- Poor self-image; overall appearance, cleanliness
- Reports of severe nightmares/sleep disturbances/fear of going to bed
- Regressive behavior/retreat into fantasy world
- Suicidal feelings
- Clinging/whining to non-abusive parent
- Loss of appetite
- Exaggerated fears
- Not wanting to go home/wanting to go home with teacher

Note: There is no behavior that is totally indicative of sexual abuse, nor does the absence of signs mean abuse has not occurred.

If you suspect that a child is being abused or neglected, refer to local child welfare authorities for further investigation.

Risk factors for Abusive Parents

- frequent geographical moves
- financial stresses such as uncertain employment, changes in employment or underemployment or other stressors
- married at a young age
- pregnancy before or shortly after marriage
- difficult labor and delivery
- abusive families during own childhood
- marital difficulties
- social isolation
- unrealistically high expectations for children
- role reversal with children
- poor control of children
- inability to cope with crises; low frustration tolerance
- perceive child's behavior as intentional and as very stressful
- poor parenting skills
- rigid, limited repertoire of discipline approaches

DEPRESSION

Signs and Symptoms

- frequent depressed mood
- crying
- decreased interest in things
- change in appetite/weight (increase or decrease)
- difficulty sleeping or sleeping too much
- feeling slowed down
- loss of energy, chronically tired
- low self-esteem, self-blame
- poor attention/concentration
- suicidal thoughts or thoughts of death
- hopelessness

Facts about Depression

- 10-25% of women and 5-12% of men will experience Major Depression at some time in their life
- Major Depression is associated with more pain and physical illness and decreased physical, social, and role functioning
- 15% of people with severe Major Depression die by suicide
- risk of Major Depression higher if you've had previous episodes or if you have relatives with a history of Depression
- without treatment, over 50% will continue to have symptoms for longer than a year
- Major Depression often follows severe, stressful events

Helping the Depressed Person

- Encourage participation in activities that once gave pleasure
- Offer emotional support individually and/or in support group setting
- engage the depressed person in conversation and listen carefully
- do not deny feelings expressed, accuse the depressed person of faking illness or laziness, or expect him/her to "snap out of it," rather point out realities and offer hope
- Help the individual get appropriate diagnosis and treatment
- suggest to the depressed individual that they see a counselor
- assist the individual in making an appointment and/or going for the appointment
- encourage them to comply and continue with treatment
- Enlist others to help you assist the depressed person
- Listen to your own instincts
- let a professional know if something the depressed person said is bothering you

Facts about Suicide

- 80 - 95% of people who attempt and complete suicide give warning signs
- men are more likely to use lethal methods (guns) resulting in more deaths by suicide
- women more likely to attempt suicide and not die, due to less lethal methods (pills)
- improvement in depression often precedes suicide
- suicide most common among divorced people
- the rate of suicide among Native Americans is twice the national average

Common Predictors of Suicide

- depression or other mental disorder
- alcohol or other substance abuse
- suicidal ideation, talk, preparation
- prior suicide attempts
- lethal methods
- isolation, living alone, loss of support
- hopelessness, cognitive rigidity
- being an older white male
- modeling, suicide in the family
- economic or work problems, certain occupations (psychiatrists, psychologists, physicians, dentists, lawyers, & unskilled laborers)
- marital problems, family pathology
- stress and stressful events
- anger, aggression, irritability
- physical illness

Assessing Lethality of Suicide Risk

1) Ask the person - "Sometimes when people are having problems like yours, they think about hurting themselves. Is this happening with you?" "That's quite a load for one person to carry. Has it made you think about hurting yourself?"

2) Ask about plans -

"Tell me what you would do."

"Do you have a plan to hurt yourself?"

"What were you planning to do?"

3) Ask about means -

"Do you have a gun/pills/poison (or whatever they would use)?"

4) No Harm Agreement -

Will they give you an unconditional agreement not to harm themselves

Have them say (and sign), "No matter what, I will not harm myself, by accident or on purpose"

5) Referral for treatment

Anyone indicating suicidal thoughts should be referred for professional treatment; if there are not an immediate risk, you can give them information and then follow-up to see if they made contact; if the individual is a current risk, they should be referred immediately for treatment

6) NO CONFIDENTIALITY

Serious concerns about suicide should not be kept confidential!

Treatment for Depression

- Hospitalization if severe functional impairment or high suicide risk
- Outpatient counseling very effective in reducing symptoms of depression and preventing relapse
- Medications effective for many; take several weeks to show improvement
- Medication and counseling capitalize on benefits of both
- Self-help books can be effective for mild depression
- Counseling which focuses on changing thinking and increasing pleasurable activities seems to be best

SUBSTANCE ABUSE

Facts about Alcoholism

- 7 to 9% of people abuse or are dependent on alcohol in any one year period
- 13 to 23% of people will have an alcohol problem at some time in their life
- men are five times more likely than women to have an alcohol problem
- alcohol abuse is a leading cause of physical problems resulting in hospitalization
- alcohol abuse is a factor in many suicides, homicides, and criminal behavior
- alcohol abuse is associated with increased rates of child abuse

Warning Signs of Alcohol Abuse

- pattern of increased use
- secretive drinking
- drinking in the morning
- tremors or shakes when not drinking
- daily drinking
- social or occupational impairment
- drinking in high-risk situations

Patterns of Alcohol Abuse

Chronic Drinking

- individual drinks large amounts every day
- drinks until intoxicated
- plans life around drinking
- social and occupational impairment evident

“Social” Alcoholic

- individual drinks primarily evenings and/or weekends
- work not usually affected
- minimal cravings

Binge Drinking

- periods of abstinence followed by periodic binges
- during binge, may be intoxicated for days

Treatment for Substance Abuse

- Alcoholics Anonymous

12 step support group which encourages complete abstinence

- Detoxification

medically supervised withdrawal from alcohol; necessary to prevent Delirium Tremens (DT's) in heavy, chronic (or binge) drinker

- Inpatient Treatment

generally follows AA model, with inclusion of relapse prevention, education, and medication if necessary; heavy emphasis on group support

- Outpatient Treatment

programs generally similar to inpatient, can be as effective as inpatient if individual has adequate support and can abstain in unsupervised setting

PEER LISTENER
TRAINING

SESSION V

SUPPORT SEEKING

*And it is still true,
no matter how old you are,
when you go out into the world,
it is best to hold hands
and stick together.*

- Robert Fulgram -

SOCIAL SUPPORT

- I. Providing support
- II. Informal support
- III. Formal Sources of support
- IV. Peer Listener Network
 - A. Confidentiality
 - B. Supervision
 - C. Referral
 - D. Documentation

SOCIAL SUPPORT

We all need a network of friends and neighbors who support us through good times and bad. A "social support system" includes people who live and work with us; people we share ideas and feelings with; people who celebrate successes with us and who bring us up when we are feeling down.

Many people who survive a disaster experience a strong desire to separate from others. They withdraw, even from the people they are closest to. It's hard to face people when even a casual, "How are you doing?" can be difficult to answer. But ongoing avoidance of family, friends, and strangers make everything harder for everyone. It's an odd irony that we're most likely to turn away from people right when we need them most. Overcoming the tendency to isolate takes real strength and discipline.

Research shows that people who see being able to ask for help as a strength come through disasters stronger and healthier than those who view seeking help as a weakness. Some people say they are "too proud" to ask for help. Yet even these people probably have asked for help at one time or another. Somehow when a crisis occurs we can forget there are people ready and willing to help us. As a Peer Listener, you will be providing support to people who are seeking support, but more importantly, you can be a source of support to those who are uncomfortable asking for it.

PROVIDING SUPPORT

Support Functions

- 1) **Listen:** Each of us have occasions when we need people who will really listen to us, without giving advice or making judgments. We need someone with whom we can share the joys of success as well as the pain and frustration of failure.
- 2) **Providing emotional support:** Most of us need a person/s willing to provide unconditional support--people willing to be on our side in a difficult situation even if not in total agreement with what we are doing.
- 3) **Providing physical support:** Sometimes we need a person/s willing to provide physical help--help with childcare, eldercare, or chores; help with around the house or meeting demands of seasonal pressures.
- 4) **Affirming skills:** All of us need appreciation for the skills we possess and the work we do. This affirmation of competence has two dimensions: work skills and personal skills. Affirmation of work skills should come from people who work in the same field; personal skills can come from anyone we respect and trust.
- 5) **Providing challenge:** When we are not challenged, we run the risk of stagnation. Most of us need others who will stretch us by questioning if we are really doing our best to overcome obstacles. Such friends can also help us cut through our emotionality and arrive at a more rational decision on a troublesome issue.
- 6) **Playing:** Each of us needs others with whom we can have fun--people we can play with, people we can joke with, people with whom we can let our hair down and just be ourselves. Humor and play can help us to gain a new and fresh perspective on the perplexing situations which confront us.

HELPING OTHERS

- Show by words and actions that you care
- Help the person to accept help
- Help with everyday tasks
- Help the person confront the crisis and talk about it
- Be a good listener
- Don't give false assurances
- Don't encourage them to blame others
- Help them to look at all of the facts and alternatives
- Encourage the person to focus on the practical futures
- Encourage sensible health habits
- Respect their privacy

INFORMAL SUPPORT

A Peer Listener Network can serve as an informal support service for community members, particularly for those individuals who are reluctant to use formal support networks.

What is Helping?

Four factors affect what happens to people when they encounter stress, hardship or difficulties:

- 1) the hardships resulting from the situation,
- 2) the person's or family's perception of the situation,
- 3) the person's or family's strengths, resources, and coping skills,
- 4) and the person's or family's outside resources/support

Offering Help

Helping is basically a process of enabling a person to solve a problem, face a crisis or grow in the direction he (or she) chooses. The helper's role involves providing the person in need an opportunity for working through his (or her) feelings, finding alternatives, and becoming ready to act. It is not your role to decide if help should be given. The person or family needs to decide for themselves whether they want help at all and what kinds of help they are willing to receive.

It can be difficult for people to accept help. One way people avoid facing a crisis is to deny that they need help. These people may brush off offers of assistance and project the illusion that "everything is all right." People who weather crises best are those who are able to accept or even enlist the help of others.

You can make it easier for others to accept help by your own attitudes. Affirm (for yourself and to them) that asking for and accepting help is a sign of strength and maturity. You also can make it easier by improving your helping skills; some of our natural tendencies may not be helpful to a person in crisis.

WHEN "HELPING" IS NOT HELPFUL

- The helper fails to listen.

People in crisis need to talk. Talking helps the person to relieve some tensions, see the situation in a clearer light and often see solutions for themselves. Don't underestimate the value of listening.

- The helper gives advice.

Advice may be appropriate, eventually. But it should only come after the person has had an opportunity to talk about the situation and about feelings. If you give advice when the person still feels unheard, your words may fall on indifferent or even offended ears. *Listen first.*

- The helper merely says, "I'm available."

The person needing (perhaps even wanting) help may not feel comfortable asking if this is the only invitation you give. When you offer specific things you can do, the person can choose something that is needed with less fear of rejection.

- The helper gives false assurances.

All of *our* feelings urge us to give reassurance. But a "don't worry, everything will be all right" approach does the person a disservice. Everything may not be all right. This kind of "assurance" may make the person believe it is wrong to have feelings of hurt, fear, or anger. It is better to assure people in crisis that we have faith in their ability to work through the problem. Let them know that you are willing to work through the situation with them. If you are not able to help, strongly consider referring the person to another professional who may have the information, the services, or the skills the person needs.

Helpers Are...

Genuine - real in their relationships,
without facade or front

Empathetic - feeling *with* another

Caring in a non-possessive way

Accepting without imposing conditions or judgments

Willing to let others have the responsibility for
their own growth and change

Aware of their own limitations -
their strengths and weaknesses

Willing to learn new skills to listen better
and help more effectively

Committed to their personal growth
and the well-being of their own families

THE DIFFERENCE BETWEEN HELPING AND RESCUING

When we listen to people's problems, it is easy to get caught up in their concerns and impulsively volunteer advice or assistance before it is requested. This is generous, but may rob the person you're saving from an opportunity to tell you the whole story. Here are some characteristics of HELPERS and RESCUERS.

THE HELPER...

- Listens for a request
- Presents an offer
- Gives only what is required
- Checks periodically with the receiver
- Checks results:
 - functioning better?
 - meeting goals?
 - solving problems independently?
 - using suggestions successfully?
- Listens more than talks

THE RESCUER...

- Gives when not asked
- Neglects to determine if an offer is welcome, and usually has a personal investment in the person's accepting help
- Gives more help than needed and longer than desired
- Omits or ignores feedback
- Doesn't check results. Feels good when help is accepted, feels hurt when turned down
- Does most of the talking

HOW TO BE A PEER LISTENER

General Guidelines

- 1) Seek and be sought
- 2) Listen and watch
- 3) Talk - let other's know what you've learned about the long term mental health effects of disasters; tell them about the programs available without waiting for them to ask
- 4) Normalize feelings and behavior
- 5) Take care of yourself!

Initiating Contact

- 1) **Assure privacy, safety, and trust.** Let the person crisis know that this is between the two of you -- unless he plans to hurt himself or another.
- 2) **Use a door opener to start the dialogue.**
- 3) **Listen completely to the individual.** Listen for verbal and nonverbal signals. Listen to feelings communicated.
- 4) **Reflect back a feeling that you hear:** "You're scared about where the money will come from, is that it?"
- 5) **Help the individual focus and clarify.** Sometimes people in crisis feel overwhelmed by too many issues. Focus on one at a time. "It sounds like you're troubled about arguments between your daughter and wife, as well as being worried about the money problems. Which one of these most concerns you? Let's work on that one first."
- 6) **Check out what options are available to help remedy the problem:** "What have you used in the past to help you? What are you considering now?"
- 7) **Research other options:** "I hear that the _____ has a good program on financial management. Why not give them a call!"
- 8) **Affirm confidence in that person's ability to make choices:** "I'm confident that you'll figure this out. I'm here to support you in your decision-making process."
- 9) **Follow-up to discover what steps have been taken and their success rates:** "Last week you decided to make an appointment at Sound Alternatives. Did you have a chance to speak to anyone there? Did you find that helpful?"
- 10) **Begin the process again for another problem area, or let go.** Allow the individual to continue on his own journey or refer him to another who may provide different assistance.

FORMAL SOURCES OF SUPPORT

Formal support includes individuals and agencies in the community that are designed to provide support, such as churches, mental health agencies. Formal support services are rarely sought by disaster victims who do not perceive themselves nor wish to be labeled as "mentally ill." In addition, in rural communities, formal support services are often very limited.

In addition to services provided by community agencies, self-help groups can be another source of formal support for individuals in need.

Types of Support

Mental Health

- Individual therapy
- Group therapy
- Treatment programs
- Crisis intervention
- Hospitalization
- Self-help groups

Occupational/Financial

- loan services
- government programs
- employment services

CONFIDENTIALITY

You will generally need to spend time building trust with someone before they are willing to talk with you about sensitive issues. Remember that trust is not given but earned.

Confidentiality plays a big role in earning trust, and is an important part of being a Peer Listener. Because confidentiality can mean different things to different people, confidentiality expectation for the Peer Listener are given below:

- Personal and financial information of others is **NEVER** discussed among friends, family, or acquaintances
- Personal and financial information of others is never discussed in public
- Names of those with whom you work are shared only with your supervisor
- Personal files or case notes of those with whom you work should be stored in a safe place not accessible to others. You and your supervisor must decide on the location of the safe place and who will have access to it
- No participants shall be referred to other agencies without their consent
- When you are not sure how to handle a particular situation, discuss it only with your supervisor or agency contact
- When you need to use general information for reports, use no names of participants

CONFIDENTIALITY (Cont.)

Exceptions to Confidentiality

- when someone threatens physical harm to himself or herself or another individual, you need to let that person know that you **cannot** keep that information to yourself; try to get his or her permission to contact a mental health provider, minister, sheriff, or other professional; you cannot obtain consent, let the person know you must seek help on your own initiative

Violating the confidentiality agreement between you and those people with whom you work can destroy any trust you have established or progress you've made. It can hurt both your reputation and the reputation of your sponsoring agency. Please take these confidentiality expectations seriously!

THE IMPORTANCE OF CONFIDENTIALITY

Your clients, like your closest friends, put their trust in you and confide personal information and feelings. **They deserve complete confidentiality.**

FOCUS:

- a. Impress on you the importance of keeping confidentiality and discussing it with the individual with whom you intervene.
- b. Help you become aware of some seemingly innocent traps.

Illustration:

You have seen a sixteen year old daughter of an acquaintance. In her need to talk, she really unloaded a lot in the first session. You did not get around to telling her how you would handle confidentiality if her parents called. Her mother did call and all you told her was that you and Cathy got on well and that you expected her for another session. Cathy did not return. Although you did not break confidentiality, you had not made that clear to her during the first meeting. She was afraid of you telling her mother her innermost thoughts.

Comments:

Persons who need emotional first aid have a need to share their feelings, fears and inner thoughts as well as to confess behavior they would not report to others. In short, they need to be able to trust you.

There is a problem of what you actually do with the confidential information. Then there is the problem of what the client fears you may do or have done with it.

In any situation, such as in a small community, where the client and you have many overlapping relationships, the situation is fraught with *real* and *imagined* dangers.

There are situations where some other person such as a spouse, parent, lawyer or police may attempt to get information from you. Even in these situations, it is important to respect the privacy of your client unless they have told you it is okay to talk to a designated person.

Peer listeners need to be clear themselves about their own principles and ability to keep confidentiality. You must inform your clients about how you will maintain confidentiality; do not assume that they will know without you telling them.

If for some reason you need to talk to another person about the client, such as a family doctor or parent, be sure to get the client's permission; in writing is best.

Prior to talking to someone about the client, discuss with them what you will say and be sure that they are comfortable with the level of information you are providing. Do not provide unnecessary information when talking or writing about a client, whether you are talking to the family doctor, the school principal, an employer, etc. Get to the point and report only what is essential and relevant.

If you have a peer or consultant to whom you turn for help and/or from whom you receive training, inform your clients that you have this support. Do not ever put yourself into situations where you cannot turn for help. Assure the client that this is normal practice for you and that you will maintain appropriate confidentiality.

REFERRAL

TIPS TO HELP YOU ENCOURAGE A FRIEND TO SEEK PROFESSIONAL HELP

Before you decide it's too difficult to get your friend to seek help, remember, your encouragement is important. Without your support, your friend may not seek needed professional advice.

Following are some tips that should help you as you confront a friend you're concerned about and encourage him or her to seek professional help.

1) Plan a Caring Confrontation

If possible, try to talk with your friend when neither of you is rushed or distracted. Use phrases such as I've been worried about...or I'm bringing this up because I really care about you..

2) Protect Privacy

Find private space and make sure there are no interruptions while you are talking. Send the children to play in the next room, unplug the telephone, etc. Sensitivity to your friend's privacy communicates trust, respect, and sincerity.

3) Discuss Specific Behaviors

Prior to the caring confrontation, list the behaviors you've seen your friend exhibit that concern you. Your list might include withdrawal, anger, self-destructive action, depression, lack of sleep or loss of appetite.

4) Ask What Your Friend Thinks and Feels

Being confronted with an emotionally painful problem is stressful. Initially, your friend may feel confused, frightened, embarrassed, or defensive. It may be hard for him or her to respond to your concerns.

Ask your friend, How do you feel about the problem?

Then be a good listener. Listen to the words and feelings expressed, and check for understanding. Support any attempts your friend makes to respond to the concerns you've voiced.

5) Understand Possible Barriers and Offer Alternatives

Before you approach your friend about the problems, understand what barriers may be keeping him or her from seeking professional help and be able to offer suggestions to help overcome these barriers.

For example, some people believe that only those who are mentally *ill, crazy, or psychotic* seek professional help. Since they don't want their friends, neighbors, or family members to label them as such, they won't seek help from a counselor.

They may not realize that counselors also work with individuals struggling with personal problems similar to their own. The counseling setting offers such individuals a trusting, warm, and non-judgmental atmosphere in which to work out difficult problems with the help of an expert.

Others feel they can't afford the consultation fees or transportation costs. They may lack practical information about costs, sliding fees, use of health insurance, and the availability of transportation assistance from friends, churches, and other community sources.

Still others have more personal fears. Confronting a problem and accepting counseling to change the problem can create anxiety and increase personal vulnerability. Some people feel accepting help is not a positive and strong response to solving a problem.

Being a good listener is especially helpful in identifying and understanding what barriers are keeping your friend from seeking

help. Listen to the reasons your friend gives for not seeking help. Then, be able to counter with information about cost, use of insurance, the benefits of counseling, etc.--whatever is appropriate.

When preparing for your caring confrontation, ask yourself the following questions: *What barriers might I set up if I were to need professional counseling? What would my personal fears be? What information would I find useful?*

6) Locate Possible Community Resources

Before talking with your friend, you also need to know what community resources are available. Making the first contact often is the most difficult part of getting help. Offer to call a counselor for your friend or go with him to the first appointment. You can also leave the name number of a good counselor with your friend. Then your friend can call when he or she is ready.

7) Continue to be Supportive

No matter how much you prepare for your first caring confrontation, you still may not be able to convince your friend to seek professional help. Don't be discouraged!

You have taken an important first step in helping your friend. You have confronted him or her about the problem, and you have shown that someone cares. Continue to offer support and encouragement. It may take much time and effort to get your friend to seek help.

Encouraging a friend to seek professional help to work out a serious personal or family problem is not an easy task. But it is a worthwhile one. We all can make it through tough times when we have *a little help from our friends!*

WHEN TO MAKE A REFERRAL

When You're Over Your Head:

Guide your client in considering courses of action or resources for help. If your client's needs fit your skills, perhaps you can help. Quite often the problem can't be solved by you or the person you are helping. In these situations, it is best to refer the person to someone else or to a group who can offer more specific assistance. This may be professional help (legal, financial, emotion,, spiritual) or perhaps a support group or a supportive person.

Do not hesitate to admit that you don't know how to solve the problem. Just be willing to help the person find someone who might know. As you make the referral, remind your client that you do care. You care enough to want the best possible help or service for that person.

Your most important gift to your clients is your listening, your acceptance and your sincere interest in them. To know you are not alone gives courage.

When to refer your client:

- 1) When you feel persistently uncomfortable
- 2) When you believe that improvement is "impossible" or the situation is "hopeless"
- 3) When the person you visit with says, "nothing is helping" or what you provide the person isn't helping
- 4) There is an obvious change in speech, appearance
- 5) The person continues to be so emotional he or she can't communicate
- 6) There is ongoing deterioration of life (social and physical)
- 7) All the person discusses are physical complaints
- 8) There is a sudden onset of memory confusion
- 9) Substance abuse
- 10) Hallucinations, delusions or severe pathology
- 11) Threats of self harm or harm to others
- 12) Aggression and abuse (verbal and physical)
- 13) If the situation seems horrible or unbearable; ***and most importantly,***
- 14) If you're unsure, then refer!

HOW TO REFER A PERSON FOR HELP

1) Be aware of agencies and resources available in your community. Get to know the professionals and volunteers in your community who can help-- find out what services they offer and what their limitations are. Be sure to touch base with the following: Extension, social services, mental health, public health, community action, food pantries and support groups.

2) Listen for signs and symptoms that the person or family needs help that you can't provide (i.e., legal advice, financial advice, personal counseling). Remember, you can be the link the person or family needs to resources that can help them deal better with their situation.

3) Assess what agency or community resource would be most appropriate to address the person's (or family's) problem. This is why it's important to know what community resources are available. If you have any questions about whether an organization could be of help, given them a call and ask.

4) Discuss the referral with the person or family. You might say, "I sense that you need help with ____. I think ____ organization can help you." It's even more useful if you can say "I know of a fisherman that went to ____ organization and they found it to be very helpful." In short, if you know of fishermen who have been helped, share their experiences but keep their names confidential.

5) Explore the individual's or family's willingness to contact the community resource. You might say, "Does it make sense to you to contact ____?" or, "How do you feel about seeking help from this agency?" If the person or family feels comfortable making the contact, simply urge them to do so.

6) If the person or family is unwilling to make the contact or if there is some danger if action is not taken, you should take the initiative:

- a. Call the agency and ask to speak with the intake worker (if there is one).

- b. Identify yourself and your relationship with the person or family.
- c. State what you think the person's or family/s needs are (depressed, suicidal, needs food or fuel, needs legal advice).
- d. Ask the agency what follow-up action they will take and what (if anything) you can do.

7) Try to find out whether the person or family contacted the resource and whether they were helped. Don't pry for details--just make sure they know that you care and that you want them to get the help they need.

DOCUMENTATION

Following any type of contact with an individual, be sure to complete a **Peer Listener Contact Form**. These forms will be used as documentation of contacts for supervision purposes as well as for data collection regarding the effectiveness of the program.

A Contact Form should be filled out for each contact you have with an individual, indicating on the form if it is a repeat contact.

Appendix G

Outreach Activity: Talking Circle

Introduction

The final outreach resource provides culturally-based support for indigenous Native populations. This appendix is included to demonstrate the need to determine community characteristics and address the needs of special populations within a community. Community leaders should determine culturally appropriate activities through organizations and leaders of Alaska Native populations. Phone numbers and organizational names can be found Appendix H, Local State and Federal Help and Information Directories.

The following steps are suggested for the organization and presentation of Talking Circles:

1. Identify and contact leaders in local culturally diverse groups. Many of these groups will have established a means to insure that their needs are being addressed through community councils or community governments. City meeting minutes may identify appropriate leaders in the Native community for contact.

2. Determine what activities will be accepted by all cultural groups, by including their leaders in planning are having the groups plan the activities themselves. The involvement of group leaders may be a key in motivating group members to participate in the programs.

3. Identify spiritual leaders to conduct the appropriate ceremonies for cultural groups. There may be additional equipment necessary for ceremonies (drums, specials items) which you may have to coordinate and obtain from outside the community.

4. Advertise - distribute information throughout the local community promote maximum participation. Check with the spiritual leader of ceremonies to determine if it is appropriate for those outside of the cultural group to participate.

Attached is the definition of the “Talking Circle,” its’ historical significance and the different types of “talking circles” and their purposes. There is also presented a discussion about some of the ceremonial items, rules and practices of Native Americans and Alaskan Natives in preparation for the “Talking Circle.”

The Talking Circle

The Talking Circle has been used throughout history and has recently come to the fore as a therapeutic tool as well as a support group system. There are many kinds of talking circles. Usually, there are some basic rules that each facilitator uses as perimeters for the circle participants. Two basic rules are:

1. Confidentiality be respected
2. Each person has a chance to speak without interruption and can opt not to share if they choose not to.

Different types of talking circles:

BASIC TALKING CIRCLE: A designated "leader" starts the circle. There are no talking circle "guru's," anyone who has the interest and the "heart" can start a circle. Each person gets a chance to share if they choose to. The circle usually goes clockwise in respect for the cycle of life. This circle may go around a second time, to give those who want to share more to do so. There is a beginning, a middle, and a closure. One may choose to start with a meditation or a prayer and end with a closer prayer. A circle may also start with a moment of silence to reflect on why people are there. Each person can start with stating their first name, so that others can know who they are.

HEALING CIRCLE: A circle that specifically addresses grief and loss issues may also be facilitated. A circle may be dedicated to a loved one or for each individual to express specific issues. A candlelight talking circle is also very healing. Each one is given a candle and as their turn comes up, their candle is lit by the person before them, until the candles are lit.

FEEDBACK CIRCLE: A circle group may want to have feedback during the talking circle. This may be decided ahead of time by the group. If a person wants feedback on what they just shared, then they can ask for feedback from the rest of the participants. This feedback circle is being used by the Elder who facilitates youth and correctional inmate talking circles.

ELDERS CIRCLE: The elders would sit in a circle and have a talking circle, it can be on Values, Beliefs, or general sharing of their wisdom of the way of being. The outer circle would sit and listen. This is a traditional circle being used for teaching local native ways in the Athabaskan and Canadian Indian tribes.

MAGIC CIRCLE: This circle can be used with very young children. Each child can share, much like the "show and tell," and the basic rules of respecting and listening to the speaker is emphasized. This can be a very useful circle in working with youngsters to teach good listening and sharing skills.

COMMUNITY TALKING CIRCLES: A community talking circle can be very powerful after a meeting that addresses some community problems or issues. This gives members a chance to voice their opinion without interruption. I have been involved in community talking circles that have lasted many hours. A break can be at mid point, especially if there are elders in the circle that may need a break.

CEREMONIAL TALKING CIRCLES: A pipe ceremony or a prayer circle has been used by many groups.

PRAYER SWEATS: A circle can be done in a sweat/sauna with prayer. A sweat/sauna can purify the body as well as the spirit through prayer. Sage, cedar, sweet grass or a local herb can be offered and sprinkled on the rocks to "smudge" or purify the air.

A talking stick or a "permission" to talk feather or rock can be used. The talking stick is passed on to the next person when the person speaking is done. Remember, that if the next person wishes not to share or talk, they have that option. Sometimes, a person may just sit with the feather or stick and not say anything. They are sharing their silence and should be allowed to hold the feather until they are ready to pass it along.

Smudging, or purifying with smoke is also used in traditional talking circles. A bowl of herbs are offered with prayer and/or silence. As we bathe with a shower or a bath, we clear or purify the personal space, aura, or body energy with smoke from burning herbs. The Native American and the Alaskan tribes have used some type of local herb to "smudge" or purify their personal space/energies.

I am sharing some very basic things that I have learned from others and participating in many types of circles. The talking circle can be used in a family setting. Also some conflict resolution talking circles can be facilitated that give each family member a safe place to voice their opinions. Many families are using this method for furthering family unity.

Thank you for your time.

Mary Stachelrodt

Appendix H

Local, State and Federal Help and Information Directories

Introduction

The following resource directory contains a full range of listings for institutions and organizations locally, statewide and federally that can be contacted in the event of a technological disaster. The directory is designed to allow communities to tailor the initial entries in this section to their community's general needs. There are also sections which identify consultants for disaster mental health, teaching materials in disaster mental health and an example of a daily community fact sheet produced by the City of Cordova, Alaska to keep residents informed of current news and information related to the *Exxon Valdez* oil spill.

This resource is invaluable to community leaders, mental health professionals, and disaster relief administrators for disaster preparedness planning, mental health intervention, program development, and information. The directory can be revised and modified to meet the needs of the impact community.

Following you will find:

- Community Quick Reference Fill-In Guide H-2
- Expanded Emergency Notification Checklist H-7
- Regional Phone Directories H-43
- Consultant Resources in Disaster Mental Health H-43
- Teaching Materials in Disaster Mental Health H-46
- “Cordova Fact Sheet” – An Example H-51

Community Quick Reference

Fill-In Guide

**RESOURCES: LOCAL, STATE AND FEDERAL HELP AND INFORMATION
DIRECTORIES**

QUICK REFERENCE EMERGENCY NOTIFICATIONS

Local	Coast Guard	_____
	Police	_____
	Fire	_____
	Hospitals	_____
	Port Authority	_____
	Harbormaster	_____
	Emergency Response Center	_____
	Mental Health Association	_____
	Community Help Center	_____
	<u>Crisis Intervention Help Lines</u>	
	Abuse	_____
	Alcohol & Drugs	_____
	Poison Control	_____
	Suicide	_____
Rape	_____	

State: **Alaska Department of Environmental Conservation** **See next page**

	<u>DAY</u>	<u>24-HOUR</u>
Federal: National Response Center	800-424-8802	SAME
USCG MSO Anchorage	907-271-6700	SAME
USCG MSO Valdez	907-835-4791	SAME
USCG MSO Juneau	907-463-2065	800-478-5555
Pacific Strike Team	415-883-3311	415-883-0307
US EPA Region X	907-271-5083	800-424-4372
NOAA SSC	907-271-3593	888-789-2782
Federal Emergency Management Agency (FEMA) Operations Center	907-481-8800	800-634-7084

Alaska Department of Environmental Conservation

During normal business hours:
Call the nearest office of the ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Southcentral Region	Southeast Region	Northern Region
Anchorage District 269-7504 Kenai District 262-5210 Matanuska Susitna District 376-5038 Valdez Field Office 835-2824 Western District 349-7755 Bethel Field Office 543-3215 Kodiak Field Office 486-3350	Juneau District 465-5250 Ketchikan District 225-6200 Sitka District 747-8614 Regional Office (Juneau) 465-5066	Northern Alaska District 451-2360 Nome District 443-2600 Regional Office (Fairbanks) 451-2360
		Pipeline Region
Regional Office 269-7649	<u>“800” Spill Reporting Number</u> 1-800-478-9300	PWS District 835-4698 SPCO Representative 271-4336 Regional Office 269-8463 Dead Horse Field Office 659-2215

**The following lists are reprinted from the Unified State/Federal
Preparedness Plan for the State of Alaska**

Alaska State Support Agencies	
Department of Military & Veterans Affairs	428-7000
Division of Homeland Security and Emergency Management	800-478-2337
	428-7000
Department of Natural Resources	269-8400
Public Information Center	269-8800
Division of Oil and Gas	269-8721
Division of Parks & Recreation, History & Archaeology Office	269-8721
	267-2338
Department of Fish and Game	269-5511
Department of Public Safety	428-7200 (24 Hours)
State Troopers (Dispatch)	
Department of Community and Economic Development	465-2500
	465-2700/269-4860
Department of Labor & Workforce Dev.	465-3030
Department of Health and Social Services	465-2250
Department of Administration	269-5100
Department of Law, Civil Division	
Department of Transportation/Ports & Harbors	269-6241
University of Alaska-Anchorage (Environment & Natural Resources)	257-2700

Local (Coastline)	
City of Valdez	907-835-4313
City of Cordova	907-424-6200
City of Whittier	907-472-2337
Village of Tatitlek	907-325-2311
Village of Chenega Bay	907-573-5132

Industry/Spill Response Organizations

Ship Escort Response Vessel Service (SERVS) of Alyeska Terminal VMT Duty Officer/Designee	(24 hrs.) 907-834-6901 907-255-4749 Cell 907-834-7395 Pager 055
Alyeska Pipeline Service Company	907-787-8777
CISPRI (a Cook Inlet oil spill response coop)	907-776-5129

Public Organizations

Prince William Sound Regional Citizens' Advisory Council	
Anchorage Office	800-478-7221 907-277-7222
Valdez Office	877-478-7221 907-835-5957
Cook Inlet Regional Citizens' Advisory Council	907-283-7222

Expanded Emergency Notification Checklist

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Expanded Emergency Notification Checklist

Coast Guard Contacts

TIME	DATE	Coast Guard Contacts	PHONE
_____	_____	National Response Center	800 424-8802 202 267-2675
_____	_____	USCG District 17 (m)	463-2065
_____	_____	USCG District 17 OPCEN	800 463-2000
_____	_____	USCG District 17 Public Affairs	463-2067
_____	_____	USCG Pacific Strike Team	415 883-3311
_____	_____	National Strike Force	919 331-6000
_____	_____	National Pollution Funds Center	703 235-4700
_____	_____	USCG MSO Valdez	835-7200
_____	_____	MLC Pacific Area Command	415 437-3014
_____	_____	Marine Search and Rescue	800 478-5555

Federal Agencies

TIME	DATE	Federal Agencies	PHONE
_____	_____	U.S. Environmental Protection Agency	271-5083
_____	_____	Valdez 24-Hour Number	835-2824 800 781-0983
_____	_____	U.S. Department of the Interior	271-5011
_____	_____	National Oceanic & Atmospheric Administration	271-3593
_____	_____	U.S. Forest Service	743-9500
_____	_____	U.S. Army Corps of Engineers, Emergency Mgmt.	753-2513
_____	_____	Federal Aviation Administration	271-5645
_____	_____	National Weather Service	835-4505
_____	_____	National Marine Fisheries	271-5006
_____	_____	U.S. Fish & Wildlife Services	786-3542
_____	_____	Marine Mammals Mgmt.	800 362-5148

Alaska State Agencies

TIME	DATE	Alaska State Agencies	PHONE
_____	_____	Dept of Environmental Conservation (Valdez) (Anchorage) 24-Hour Number	835-4698 271-5083 800 478-9300
_____	_____	Department of Fish and Game	267-2338

		After Business Hours	337-7933
		Department of Military & Veterans Affairs	428-7000
		Division of Homeland Security 24-Hour Number	800 478-2337
		Department of Law	269-5100
		Department of Natural Resources	269-8463
		State Historic Preservation Office	269-8727
		Department of Public Safety, Div. of Wildlife Protection	835-4307
		State Troopers 24-Hour Number	428-7200
		Department of Transportation & Public Facilities	834-1099

Local Government Agencies

TIME	DATE		PHONE
		Akhiok Mayor	836-2229
		Chenega Bay Corporation	573-5135
		City of Cordova	424-6200
		Cordova Harbor Master	424-6400
		Homer Mayor (City Hall)	235-8121
		Karluk Tribal Council	241-2218
		Kenai City Manager (City Hall)	283-7535
		Kenai Peninsula Borough Mayor	262-4441
		Kenai Peninsula Borough - Emergency Mgmt.	262-4910
		Kodiak City Manager	486-8640
		Kodiak Harbor Master	486-8080
		Kodiak Island Borough Manager	486-9300
		Larsen Bay Mayor	847-2263
		Nanwalek Village Chief	281-2274
		Old Harbor Mayor	286-2204
		Ouzinkie Mayor (City Council)	680-2209
		Port Graham Village Administrator	284-2227
		Port Lions Mayor	454-2332
		PWS Response Center, Cordova	424-3447
		Seldovia City Manager	234-7643
		Seldovia Oil Spill Team	234-7400
		Seward Harbor Master	224-7187
		Seward Mayor	224-4046
		Tatitlek IRA Council	325-2311

_____	_____	Valdez Harbor Master	835-4981
_____	_____	Valdez Mayor/City Manager	835-4313
_____	_____	Whittier Harbor Master	472-2330
_____	_____	Whittier Mayor/City Manager	472-2337

Response: Notification Policies

RESPONSE: NOTIFICATION POLICIES

The purpose of this section is to centralize information about agencies, groups, trustees, organizations, and points of contact that play a role in environmental response and to help ensure the appropriate people are notified.

Spill Reporting Requirements:

1. National Response Center (NRC) 800 424-8802

As mandated by 33 CFR 153.203, any person in charge of a vessel or facility shall notify the NRC immediately when they know of a discharge or reportable release. The NRC shall then notify the appropriate USCG or EPA OSC.

If it is not possible to notify the NRC or the predesignated OSC immediately, reports may be made to the nearest Coast Guard unit, provided that the person in charge of the vessel or onshore/offshore facility notifies the NRC as soon as possible. The Coast Guard MSO will notify the NRC of all medium/major discharges with high levels of public and media interest. This may be done via POLREP.

2. State-ADEC 800 478-9300

Notification is required by the responsible party (RP)) to the Alaska Department of Environmental Conservation (ADEC) regardless of the size of the discharge or release. ADEC is mandated to notify the appropriate state and local officials; routinely they will contact Alaska Department of Fish and Game, the appropriate water quality officials, and the borough or local emergency services office. If additional agencies or local officials need to be notified and not included on State notification lists, then they must request the State to include these contacts in its notifications.

Coast Guard In-House Contacts:

The following offices need notification of significant incidents so they can prepare to deploy special resources.

1. CCGD17 (mep) 463-2065
CCGD17 OPCEN (after hours, 24-hours) 800 478-5555

Notify for all medium or major spills and those which may receive high media interest. Arrange for assistance from other Coast Guard units, i.e. overflights, cutters, etc.

2. PACAREA Strike Team (PST) 24-Hours 415 883-3311

Notify for all oil or hazardous chemical cases when their personnel or equipment may be of assistance. PST resources may be requested by the OSC as per the NCP (see Sec. 301.2.) Requests from outside agencies for PST response in the coastal zone should be made via the OSC.

3. AIRSTA Kodiak 24-Hours 487-5888

Notify for overflights or air transport. Make arrangements for overflights through the Coast Guard command but give "heads up" calls to the air station for better coordination. Remember that training flights can often be diverted for overflight confirmations.

Federal Agencies:

The following federal agencies may need notification. Further detail concerning agency responsibility may be found in subpart B of the NCP and Annex A of the Unified Plan.

1. U.S. Environmental Protection Agency 24-Hours 800 424-4372

This is the designated federal OSC for all releases within inland zone. Notification of all spills originating in their zone and incidents that may require their response or assistance.

2. Dept. of Interior, Office of Regional Director 786-3542

Notify U.S. Fish and Wildlife Service for incidents that could adversely affect wildlife or a wildlife refuge. Notification of U.S. Mineral Management Service for spills which originate from an offshore drilling platform or related operations of the Outer Continental Shelf and Cook Inlet Platforms. Seek their input on possible oil seep cases.

3. NOAA Office 271-3593

Scientific Support Coordinator Pager 888 789-2782 Fax 271-3139

Seattle emergency contact 24-Hours 206 526-4911

Notify during any incidents where their scientific expertise might prove beneficial. Experts in CAMEO, spill trajectories, chemical plumes, identifying resources at risk, etc. Notify of any large incident that may have significant adverse affects on the marine environment.

4. Federal Emergency Management Agency FEMA 24-Hours 800 634-7084

Notify of any incident that could result in large-scale evacuation or relocation of people.

State Agencies:

The following state agencies may need notification. The state agency/federal OSC relationship is further delineated in section 300.24 of the National Contingency Plan. Additional information is contained in the Unified Plan, Annex A.

1. Alaska Department of Environmental Conservation: Notification of ALL oil and hazardous chemical releases and all cases of any unusual or unique notification to be made for a particular incident.
2. Alaska Department of Fish and Game: Notification of significant oil and hazardous chemical releases and all cases involving marshlands, wildlife, fisheries or any State natural resource.
3. Alaska Dept. of Public Safety, State Troopers 24-Hrs 464-1280
Notify of any spill occurring on or near a freeway, highway, or country road. Incident Commander for discharges in these areas. They can arrange for traffic and spectator control.
4. Alaska Dept. of Natural Resources: Notification of any spill or incident that occurs on or threatens state lands. This includes state parks and other state-owned uplands and tide and submerged lands.

Regional Response Teams:

The RRT can be activated by request of the OSC or any RRT member according to the policy set forth in the Regional Response Plan. The OSC should notify (for possible activation) the RRT of incidents:

1. classified as medium/major;
2. having a high media interest;
3. where a possible public health threat exists [40CFR300.(b)(7)] **or**
4. significantly threatening or impacting natural resources.

Many RRT members are Natural Resource Trustee points of contact to notify.

Trustees of Natural Resources:

It is essential that the appropriate Federal and State Trustees and Land Managing Agencies be notified, depending on the type of material released, the location of the incident and the resources at risk (e.g. lands, wetlands, estuaries, lagoons, other waterways, marine mammals, marine birds, shorebirds, migratory

waterfowl, pinnipeds, natural game resources, fish, sea otters.) The points of contact and criteria for notification are included in the Unified Plan, Annex A. The Trustees are responsible for 1) damage assessment and associated cost recovery, and 2) devising restoration, rehabilitation or replacement or acquisition of equivalent natural resources (see 300.74 of the NCP.)

Federal Trustees:

- a. Department of the Agriculture, U.S. Forest Service: Notification of any event that threatens a National Forest.
- b. Department of Commerce, NOAA: Notification of any incident that threatens a marine sanctuary or an endangered species.
- c. Department of Defense: Notification of any incident attributed to or impacting any property maintained by the U. S. Army or any incident attributed to or impacting any property maintained by the U. S. Navy or Marine Corps.
- d. Department of Energy: Notification of any incident attributed to or impacting a facility controlled/ managed by DOE including all radioactive sites.
- e. Department of the Interior: Notification of a spill/potential spill that threatens fish, wildlife, or habitats. Also, an incident that affects, or has the potential to negatively affect lands, facilities or natural resources managed by the National Park Service (NPS), Bureau of Land Management (BLM), Minerals Management Service (MMS), Fish and Wildlife (FWS). Bureau of Reclamation (BR), Bureau of Indian Affairs (BIA) or Indian Tribes.

State Trustees:

- a. Alaska Department of Environmental Conservation: Notification of any incident that threatens air, water, and land within the state of Alaska.
- b. Alaska Department of Fish and Game: Notification of any incident that threatens fish, wildlife, or other habitats.
- c. Alaska Department of Natural Resources: Notification of any incident that threatens natural resources.

Regional Phone Directories

On-Scene Coordinators

Federal On-Scene Coordinators (FOSC)

USCG MSO Valdez

835-7200

Commander

24-Hours 835-7210

Fax 835-2445

U.S. Environmental Protection Agency

271-5083

Fax 271-3424

Region X (24-Hour Seattle Office)

800 424-4372

Alaska Hazardous Waste, Seattle

800 550-7272

State On-Scene Coordinators (SOSC)

ADEC Central Response Team

269-7500

24-Hour Notification for ADEC

Fax 269-7649

800 478-9300

Police & Fire Departments

Alaska State Troopers

Chitina

822-3263

Copper Center, Glennallen areas

822-3263

Cordova

424-3184/424-6100

Glennallen

822-3263

Homer

235-8239

Kenai

262-4453

Kodiak

486-4121

Mentasta

883-5111

Ninilchik

567-3660

Northway

778-2245

Seward

224-3033

Valdez

835-4307

Home Rule/First Class/Second Class Cities

911 or

Akhiok

Village Public Safety Officer (VPSO)

836-2205

Cordova

Police

424-6100

Fire

424-6117

Homer

Police

235-3150

	Fire	235-3155
Kenai	Police	283-7879
	Fire	283-7666
Kodiak	Police	486-8000
	Bayside Volunteer Fire Dept.	486-4536
	Women's Bay Volunteer Fire Dept.	487-4312
Seldovia	Police	234-7640
	Fire	234-7812
Seward	Police	224-3338
	Fire	224-3445
Soldotna	Police	262-4455
	Fire	262-4792
Valdez	Police	835-4560
	Fire	835-4560
Whittier	Police	472-2340

Unincorporated Communities

Chenega Bay	Village Public Safety Officer (VPSO)	573-5355
Chitina	Volunteer Fire Dept. (emergency only)	823-2235
Copper Center	Volunteer Fire Dept.	822-3033
Glennallen	Volunteer Fire Dept.	822-3244
Karluk	Village Public Safety Officer	241-2241
Kenny Lake	Volunteer Fire Dept.	822-5202
Larsen Bay	Village Public Safety Officer	847-2262
Mentasta Lake	Fire Department	883-5657
Nanwalek	Village Public Safety Officer	281-2248
Old Harbor	Village Public Safety Officer	286-2275
Ouzinkie	Village Public Safety Officer	680-2365
Port Graham	Village Public Safety Officer	284-2207
	Fire Department	284-2224
Port Lions	Village Public Safety Officer	454-2330
Tatitlek	Village Public Safety Officer	325-2248
	Police & Fire Department (Valdez)	835-4560

Hospitals & Clinics

Akhiok Medical Clinic	836-2230
Chenega Bay Clinic	573-5129

Chistochina Health Clinic	822-3280
Chitina Health Clinic	823-2213
Copper Center Village Health Clinic	822-3541
Cordova Medical Clinic	424-8200
Cordova Community Medical Center Hospital	424-8000
Mental Health	424-8300
Cross Road Medical Center (Glennallen)	822-3203
Gulkana Medical Clinic	833-3646
Homer Health Center	235-8857
Homer Community Mental Health Center	235-7701
Karluk Health Clinic	241-2228
Kodiak Public Health Center	486-3319
Llanka Health Center	424-3622
Providence Kodiak Island Medical Center	486-3281
Mental Health Center	481-2400
Larsen Bay Clinic	847-2208
Mentasta Village Clinic	291-2320
Ninilchik Community Clinic	567-3333
English Bay Clinic	281-2250
Port Graham Clinic (Nanwalek)	284-2241
Old Harbor Health Clinic	286-2205
Ouzinkie Clinic	680-2265
Port Lions Health Clinic	454-2275
Seldovia Medical Clinic	234-7825
Seward Family Care	224-5205
Soldotna Hospital	262-4404
Valdez Community Hospital	835-2249
Tatitlek Health Clinic	325-2235
Whittier Health Clinic	471-2303

Veterinarians

	Phone	Emergency
Great & Small Animal Care Center (Kodiak)	486-1010	486-7165
Island Veterinary Services (Kodiak)	486-8850	654-7387
Homer Veterinary Clinic	235-8960	
Kenai Veterinary Hospital	283-4148	
Kodiak Veterinary Clinic	486-5418	
Peninsula Veterinary Services (Soldotna)	260-5850	252-7806

Prince William Sound Veterinary Clinic (Cordova)	424-3498	
Seward Animal Clinic	224-5500	
Soldotna Animal Hospital	260-7851	260-1720
Twin Cities Veterinary Clinic (Soldotna)	262-4581	
Valdez Veterinary Clinic	835-5280	
Valley Veterinary Clinic (Copper Center)	822-5886	

School Districts & Schools

The Alaska Department of Education and Early Development website contains a rolodex listing of all district and school contacts. www.educ.state.ak.us

Port Authorities & Harbormasters

Cordova	424-6400
Chenega Bay	573-5132
Homer	235-3160
Kodiak	486-8080
Seldovia	234-7886
Seward	224-7187
Valdez	835-4981
Whittier	472-2330

Marine Pilots Association

<u>Organization/Company</u>	<u>Location</u>	<u>Phone</u>
Alaska Marine Pilots Association	Anchorage	248-2436
Southwest Alaska Pilots Association	Homer	235-8783
Southwest Alaska Pilots Association	Valdez	835-2134
Stone Marine Ventures, Inc.	Anchorage	338-6075

Salvage Companies & Divers

<u>Company</u>	<u>Location</u>	<u>Phone</u>
Alaska Divers and Underwater Salvage, Inc. 24 hr. statewide response	Anchorage	694-0515 800 478-0515
Black Dolphin Divers	Seward	224-3462
C & C Aquatics	Homer	235-2415
Crowley Marine Services, Inc.	Seattle	206 443-8100
	Anchorage	278-4978
	Valdez	835-4982
Four Seasons Boat Service	Seward	224-2628

Marine Service of Alaska, Inc.	Homer	235-8047
R & R Diving Services	Valdez	835-4375
Storm Chasers, Inc.	Seward	224-3536
American Marine Corporation & Pacific Environmental Corporation	Anchorage	562-5420

Towing Companies

The following list includes companies that may have a towing capability available in various locations around the state. Inclusion on this list does not indicate prior arrangements or agreements have been made to facilitate any towing.

<u>Company</u>	<u>Location</u>	<u>Phone</u>
Alaska Maritime Agencies, Inc.	Anchorage	562-8808
	Valdez	835-2800
	Seward	224-5350
Alaska North Pacific	Anchorage	272-6145
Alaskan Barge & Salvage	Seward	224-5413
Amak Towing Co., Inc.	Ketchikan	225-8847
	Kodiak	486-5503
Anderson Tug & Barge Co.	Seward	224-5506
American Marine Corporation	Anchorage	562-5420
Bering Marine Corp.	Anchorage	248-7646
Boyer Towing Co.	Ketchikan	225-2090
Coastal Freight & Salvage	Homer	235-7399
Cook Inlet Marine	Homer	235-8086
Cook Inlet Tug & Barge	Anchorage	277-7611
Crowley Marine Services, Inc.	Anchorage	278-4978
	Whittier	472-2308
	Valdez	835-4982
Flyum's Barge Service	Homer	235-8624
FOSS Maritime Co.	Seattle	800 426-2885
Fred's Towing & Recovery	Anchorage	243-4037
Hot Shot Services	Kenai	283-2800
Kachemak Tug & Barge	Homer	235-2822
Krystal Corp.	Homer	235-8584
Mobile Grid Trailers Inc.	Cordova	424-3146
Northland Services, Inc.	Anchorage	276-4030
		800 426-3113

Samson Tug & Barge Services	Homer	424-3399
Tutka Bay Barge Services	Homer	235-8315
Wel-Aska Corp.	Valdez	835-2424

A more complete listing of related businesses in Alaska, California, Oregon, Washington, and British Columbia is in The Marine Yellow Pages, www.marineyellowpages.com, with white pages (name, address, fax number, email address, website URL, toll-free numbers, descriptive line information), classified yellow pages, an expanded Port Services Guide for Alaska fishing communities, and website listings.

Federal & State Environmental Agencies

U.S. Coast Guard	800 424-8802
National Response Center	
Marine Safety Office, Valdez	835-7200
Captain of the Port, Prince William Sound	
U.S. Environmental Protection Agency	271-5083
Alaska Operations Office	
U.S. Department of the Interior	271-5011
Office of Environmental Policy and Compliance	
National Oceanic and Atmospheric Administration	271-3593
Scientific Support Coordinator	
U.S. Forest Service	586-8863
Forest Supervisor	
U.S. Fish and Wildlife Service	786-3542
Fish and Wildlife Biologist	
National Marine Fisheries Service	271-5006
Regional Director	
Alaska Department of Environmental Conservation	
Valdez Office	835-2824
Pipeline Corridor Office	271-4336
24-hour number	800 478-9300
Alaska Department of Fish and Game	267-2338
Regional Supervisor	
Alaska Department of Natural Resources	
Natural Resource Manager	269-8463
24-hour number	451-2678

Laboratories

Chemical and Geological Labs of Alaska	Northern Testing Labs, Inc.
200 W. Potter	5761 Silverado Way unit N
Anchorage, Alaska 99518	Anchorage, Alaska 99518
562-2343	349-1000
	800 478-8838

Northern Testing Labs, Inc.

3330 Industrial Avenue
Fairbanks, Alaska
456-3116
800 478-8838

Analytica Alaska

811 West 8th Avenue
Anchorage, Alaska 99501
258-2155
Juneau - 780-6668

Batelle Ocean Science Labs

397 Washington St.
Duxbury, Ma 02332
781 934-0571

Quanterra Environmental Services

4955 Yarrow Street
Arvado, Co. 80002
303 421-6611

Water Intake / Use Facilities

Hatcheries

Prince William Sound Aquaculture	Cordova	424-7511
	a) Cannery Creek	
	b) Ester Island	
	c) Evans Island	
	d) Main Bay	
Valdez Fisheries	Valdez	835-4874
	Solomon Gulch	835-1329

Fish Processing Companies

Also look to: www.labor.state.ak.us/esd_alaska_jobs/process.htm

Copper River Seafoods	Cordova	888 622-1197
		424-3721
Icicle Seafoods, Inc.	Seattle	206 282-0988
	Anchorage	563-0800
	Seward	224-3381
	Homer	235-8107
Kodiak Salmon Packers	Larsen Bay	847-2250
Nautilus Marine, Inc.	Valdez	835-4227
Norquest Seafoods	Seattle	206 281-7022
	Cordova	424-5395
North Pacific Processors	Cordova	424-7111
Ocean Beauty	Seattle	206 285-6000
	Cordova	424-7171
Pacific Star Seafoods, Inc.	Kenai	283-7787
Peter Pan Seafoods, Inc.	Valdez	835-2080
Prime Select Seafoods	Cordova	424-7750
Sea Hawk Seafoods, Inc.	Valdez	835-4837
Seafoods, Inc.	Kodiak	486-5791
Trident Seafoods	Seattle	206 789-8545
	Kodiak	486-3266

Airport Landing Strips

<u>Location</u>	<u>R/W length</u>	<u>Surface Type</u>
Chenega Bay	3,000'	GRV
Chistochina	2,050'	GRV

Chitina	3,000'	GRV
Chitina SPB	2,500'	WAT
Copper Center 2	2,600'	GRV
Cordova Mile 13	7,500'	ASP
Eureka	2,100'	GRV
Eyak Lake (Cordova)	1,950'	GRV
Eyak Lake SPB (Cordova)	10,000'	WAT
Gulkana	4,200'	ASP
Gulkana Heli	100'	ASP
Lake Louise	2,000'	GRV
May Creek	4,300'	GRV
McCarthy No. 1	2,000'	GRV
McCarthy No. 2	4,180'	GRV
Middleton Island	5,070'	GRV
Northway	5,100'	ASP
Robe Lake (Valdez)	Unknown	WAT
Tatitlek	2,500'	GRV
Tazlina	1,400'	TRF
Thompson Pass	2,500'	TRF
Tonsina	1,600'	ASP
Valdez	6,500'	GRV
Valdez Creek	Unknown	GRV = gravel WAT = water (ice) ASP = asphalt TRF = turf

Trucking Companies & Automobile Rentals

Trucking - Motor Freight:

Copper Basin Distributors	Glennallen	822-3278
Copper Valley Construction Company, Inc.	Glennallen	822-3252
Glenn Transport	Glenallen	822-5466
Hoover's Movers, Inc.	Cordova	424-3221
Hotai's Enterprises	Valdez	835-4508
Lynden Transport, Inc.	Anchorage	276-4800
M&D Trucking	Glennallen	822-4300
Sourdough Express	Cordova	424-3580
Valdez Expediting, Inc.	Valdez	800 327-9390 835-4402

Automobile Renting/Leasing:

Cordova Auto Rentals	Cordova	424-5982
Becky Chapek Car Rentals	Cordova	424-535
Northwind Car Rental	Glenallen	822-3594
Valdez U-Drive	Valdez	835-4402

NOAA Weather Service

The National Oceanic and Atmospheric Administration can provide current and forecast weather for the marine environment as the normal inland/coastal zones. In addition, ice reports and forecasts are available upon request.

Lead Forecaster	266-5107
Ice Forecaster	266-5113

The following information was extracted from the [Alaska Marine Radio Directory](#).

NOAA Weather Radio (NWR)

NOAA Weather Radio continuous voice broadcasts on 162.40 and 162.55 MHz can usually be received 20-40 miles from the transmitting antenna site, depending on terrain and the quality of the receiver used. Where transmitting antennas are on high ground, the range is somewhat greater, reaching 60 miles or more. The VHF_FM frequencies used for these broadcasts require narrow-band FM receivers. The National Weather Service recommends receivers having a sensitivity of one microvolt or less and a quieting factor of 20 decibels.

Some receivers are equipped with a warning alert device that can be turned on by means of a tone signal controlled by the National Weather Service office concerned. This signal is transmitted for 13 seconds preceding an announcement of a severe weather warning.

VHF Continuous Commerce Weather Broadcasts (NWR)

<u>Location</u>	<u>Station</u>	<u>Frequency (MHz)</u>
Anchorage	KEC-43	162.55
Cordova	WXJ-79	162.55
Fairbanks	WXJ-81	162.55
Homer	WXJ-24	162.40
Juneau	WXJ-25	162.55
Ketchikan	WXJ-26	162.55
Kodiak	WXJ-78	162.55
Nome	WXJ-62	162.55
Seward	KEC-81	162.55
Sitka	WXJ-80	162.55
Valdez	WXJ-63	162.55
Wrangell	WXJ-83	162.40
Yakutat	WXJ-69	162.40

These VHF-FM radio stations are managed by the National Weather Service. Forecasts are issued at scheduled times; broadcast tapes are updated and amended as required. The broadcasts, in general, contain forecasts and warnings for the local area and nearby coastal waters, special severe weather bulletins, tsunami warnings, a description of the weather pattern as it affects Alaska, and weather reports from selected weather stations.

National Weather Service UHF Voice Weather Broadcasts

The following VOICE BROADCASTS are on the Upper Sideband (USB) 4125 KHz:

<u>Location</u>	<u>Station</u>	<u>Time of Broadcasts</u>
Annette	KDG-58	7:00 am & 4:45 pm
Kodiak	WHB-29	8:00 am & 6:00 pm
Yakutat	KDG-91	9:30 am & 7:30 pm
*Cold Bay	KC195	10:30 am & 8:30 pm
**King Salmon	KC198	11:00 am & 5:15 pm
Nome	KC194	11:30 am & 9:30 pm

*Cold Bay broadcasts 2512 KHz (USB) April 1 - October 15
 4125 KHz (USB) October 16 - March 31
 **King Salmon broadcasts seasonal from April 1 - October 15

National Weather Service Office Contact Numbers

Marine weather forecasts and warnings, can be obtained by telephone as follows:

24 hours Daily

#800-472-0391

(Above # is preferred)

Recorded Telephone Marine Forecasts

Anchorage	936-2727
Cordova	424-3333
Juneau	586-3997
Kodiak	487-4949
Petersburg	772-3311
Sitka	747-6011
Wrangell	874-3232

Other Office Numbers

<u>Location</u>	Telephone	<u>Office Hours (daily)</u>
Annette	886-3241	12:00 am - 5:00 pm
Anchorage	271-5106	24 hours
Cold Bay	532-2448	24 hours
Fairbanks	458-3708	24 hours
Homer	235-8588	10:00 pm - 6:00 am
Juneau	790-6824	24 hours
King Salmon	246-3303	10:00 am - 6:00 pm
Kodiak	487-2102	24 hours
Kotzebue	442-3231	12:00 am - 4:00 pm
Nome	443-2321	24 hours
Saint Paul	546-2215	12:00 am - 5:00 pm
Valdez	835-4505	24 hours
Yakutat	784-3322	24 hours

Maps & Charts

Each sub-area/regional contingency plan contains an index of U.S. Geological Survey topographic maps for that specific region. Also included are NOAA nautical charts for the area, a chart number listing, and a listing of authorized map dealers.

News Media Services

**COMMERCIAL BROADCAST AM AND FM RADIO STATIONS THAT
BROADCAST NATIONAL WEATHER SERVICE
FORECASTS AND WARNINGS**

<u>Location</u>	<u>Station</u>	<u>Frequency (KHz)</u>
Anchorage	KFQD	750
Anchorage	KHAR	590
Anchorage	KSKA	91.1 FM
Anchorage	KNBA	90.33 FM
Barrow	KBRW	680
Bethel	KYUK	580
Cordova	KLAM/KCDV	1450
Dillingham	KDLG	670
Glennallen	KCAM	790
Homer	KBBI	850
Homer	KGTL	620
Juneau	KINY	800
Juneau	KJNO	630
Kenai	KQOK	100.1 FM
Ketchikan	KTKN	930
Kodiak	KVOK	560
Kodiak	KMXT	100.1 FM
Kotzebue	KOTZ	720
Nome	KICY	850
Nome	KNOM	780
Saint Paul	KDLG	91.9 FM
Sand Point	KDLG	840
Seward	KSKA	88.1 FM
Sitka	KIFW	1230
Soldotna	KSRM	920
Unalaska	KDLG	1450

Community Communications Chart

Community	Newspaper	Television/ Scanner Channel	Radio
Cordova	The Cordova Times 424-7181	Cordova GCI Cablevision 424-7317	KLAM 1450 KCDV FM 100.9 424-3796
Homer	Homer News	GCI Cable	KBBI AM 890

	235-7767 Homer Alaska Tribune, Inc. 235-3714	235-6366	235-7721 KXBA FM 105.9 KWVV FM 103.5 KPEN FM 102 KGTL AM 620 235-6000
Kodiak	Kodiak Daily Mirror 486- 3227	KMXT-LPTV Channel 9 Kodiak Public Broadcasting 486-3181 Island Cable TV 486-8895	KMXT FM 100.1 486-3181 KVOK AM 560 KRXX FM 101.1 486-5159 K-WAVE FM 105 KPEN FM 102.7 486-6000
Kenai	Peninsula Clarion Clarion Dispatch 283-7551	GCI Cable 262-3266	KDLL FM 91.9 283-8433 KKIS FM 96.5 283-5821 KSRM Radio 92 283-9430 KXBA FM 93.3 235-6000
Ouzinkie		GCI Cable 800 800-4800	
Seward	Seward Phoenix Log 224-8070	Seward Cablevision 224-8912	K-WAVE FM KPEN FM 102.3 KGTL AM 224-6000
Soldotna			KKIS FM 96.5 283-5821 KSRM Radio 92 283-9430 KWHQ FM 100.1 283-9430
Valdez	Valdez Vanguard 835-2211 Valdez Star 835-2405	Valdez GCI Cablevision 835-4930	KCHU 770 835-4665 KVAKFM 93.3 KVAK AM 1230 835-5825

Volunteer Organizations

Agency

American Red Cross

Anchorage Disaster Services State Coordinating

Telephone Number

277-1538

Chapter	800 951-5600 (after hrs.)
Fairbanks – Disaster Lead Chapter	456-5937 451-8267 (after hrs.)
Civil Air Patrol:	
*Rescue Coordination Center	428-7230
US Air Force Elmendorf AFB	
Alaska Wing to the Civil Air Patrol	800 479-5001
Anchorage Birchwood Composite Squadron	688-4995
Anchorage Polaris Composite Squadron	272-7227
Fairbanks	474-0784
Homer	235-8062
Juneau	789-0245
Kenai	283-7801
Seward	224-3000
Valdez	835-5007
Bird Treatment & Learning Center	562-4852
Dr. Jim Scott	277-8808 (home)
<ul style="list-style-type: none"> • Normal Process: The Alaska State Troopers will initiate a request for Civil Air Patrol assistance through the Air Force Rescue Coordination Center (RCC). The RCC will activate the Civil Air Patrol in the appropriate region, assign a mission number, and provide approval authority for the mission. 	

Natural Resource Trustees

Federal Natural Resource Trustee Agency Contacts

Department of Interior

Regional Environmental Officer
Office of Environmental Policy &
Compliance 1689 C Street, Room 119
Anchorage, AK 99501-5126
(907) 271-5011

Department of Commerce

NOAA Hazardous Materials Response &
Assessment Division (N/ORCA3)
1801 Fairview Ave. E
Seattle, WA 98102
206 553-4548
National Marine Fisheries Service
Law Enforcement
222 W. 7th Ave. #43
Anchorage, AK 99513-7577
(907) 271-5006

Department of Agriculture

U.S. Forest Service
P.O. Box 21628
Juneau, AK 99802-1268
(907) 586-8863

Department of Defense

Commander, AK Command
ALCOM/CC
Bldg 5-800, G St. Suite 101
Elmendorf AFB, AK 99506
(907) 552-3100

State of Alaska
Alaska Department of Fish and Game
Commissioner
P.O. Box 25529
(907) 465-4100

Alaska Department of Natural Resources
Commissioner
400 Willoughby Ave.
Juneau, AK 99801-1724
(907) 465-2400

Alaska Department of Environmental Conservation

Commissioner
410 Willoughby Ave., Suite #105
Juneau, AK 99801-1795
(907) 465-5050

*Note: The State of Alaska Trustees indicated above were appointed specifically for the Exxon Valdez oil spill.

Local Emergency Managers

Alaska Division of Emergency Services 907 428-7000
Emergency Management Assistance (EMA)
www.ak-prepared.com

Jurisdiction	Emergency Management Contact	Phone	Mailing Address
Anchorage, Municipality of	OEM Director	343-1401(P) 249-7795(F)	Municipality of Anchorage 1305 E Street Anchorage, AK 99501
Fairbanks North Star Borough	Emergency Services Director	459-4181(P) 459-1499(F)	Fairbanks North Star Borough 3175 Pegar Road Fairbanks, AK 99709
Juneau, City & Borough of	Emergency Management Coordinator	586-0221(P) 586-5347(F)	City & Borough of Juneau 155 South Seward Street Juneau, AK 99801
Kenai Peninsula Borough	Emergency Management Coordinator	398-3533(P) 262-8603(F)	Kenai Peninsula Borough 144 N Binkley Street Soldotna, AK 99669
Ketchikan Gateway Borough	Emergency Manager	228-6618(P) 247-8439(F)	Ketchikan Gateway Borough 344 Front Street Ketchikan, AK 99901
Kodiak, City of	Fire Chief	486-8040(P) 486-8048(F)	City of Kodiak 219 Lower Mill Bay Road Kodiak, AK 99615
Valdez, City of	Police/Fire Department	835-4560(P)	City of Valdez P.O. Box 307 Valdez, AK 99686
Cordova, City of	Ambulance/Fire/Police	424-6100(P)	City of Cordova Box 1210 Cordova, AK 99574
North Slope Borough	Emergency Management Coordinator	852-0284(P) 852-2475(F)	North Slope Borough PO Box 869 Barrow, AK 99723
Petersburg, City of	Fire Chief	772-3355(P) 772-3599(F)	City of Petersburg PO Box 329 Petersburg, AK 99833
Sitka, City & Borough of	Fire Chief	747-3233(P) 747-7450(F)	City & Borough of Sitka 209 Lake Street Sitka, AK 99835
Whittier, City of	Police Chief	472-2340(P) 472-2344(F)	City of Whittier PO Box 687 Whittier, AK 99693

Wrangell, City of	Police Chief	874-3304(P) 874-2173(F)	City of Wrangell PO Box 1168 Wrangell, AK 99929
Haines Borough	Fire Department	766-2115(P)	Haines Borough Haines, AK 99827

Statewide Interest Groups

Organization/Description/Website	Phone	Mailing Address
Alaska Center for the Environment (ACE) Alaska's largest home-grown citizen's group working for the sensible stewardship of Alaska's natural environment. www.akcenter.org	258-4810	Alaska Center for the Environment (ACE) 807 G Street Anchorage, AK 99501
Alaska Conservation Foundation (ACF) A community foundation for the environment that receives and awards grants throughout the state to protect the integrity of Alaska's ecosystems and promote sustainable livelihoods for Alaska's communities and people. www.akcf.org	276-1917	Alaska Conservation Foundation (ACF) 441 W. 5 th Avenue Anchorage, AK 99501
Alaska Conservation Voters Protects Alaska's environment through public education and advocacy and supports pro-conservation candidates for public office. www.acvoters.org	463-3366	Alaska Conservation Voters P.O. Box 22151 Juneau, AK 99802
Alaska Health Project (AHP) Promoting occupational safety and health; reducing the risk of hazardous material management both in the workplace and community; raise awareness, provide information and training for workers, residents and communities.	276-2864	Alaska Health Project (AHP) 218 E. 4 th Avenue Anchorage, AK 99501
Alaska Marine Conservation Council A community-based organization for people who care about the health and future of Alaska's oceans and coastal communities. www.akmarine.org	277-5357	Alaska Marine Conservation Council P.O. Box 101145 Anchorage, AK 99510
Alaska Public Interest Group (AKPIRG) A non-partisan, statewide non-profit organization	278-3661	Alaska Public Interest Group

Organization/Description/Website	Phone	Mailing Address
<p>whose main purpose is to educate citizens to enable them to participate in the political process, provide the public with practical and cost efficient ways to work with government and the private sector, and encourage and provide information to grassroots efforts that advocate the public interest.</p> <p>www.akpirg.org</p>		<p>(AKPIRG) 442 W. 5th Avenue Anchorage, AK 99501</p>
<p>Alaska Raptor Rehabilitation Center (ARRC)</p> <p>The mission is three-fold: provide medical treatment for injured bald eagles and other birds of prey; educate people about Alaska’s birds and environmental conservation; and conduct bald eagle research.</p> <p>www.alaskaraptor.org</p>	747-8662	<p>Alaska Raptor Rehabilitation Center (ARRC) P.O. Box 2984 Sitka, AK 99835</p>
<p>Alaska Sealife Center</p> <p>International Wildlife Research</p> <p>The Center is a non-profit marine science facility dedicated to understanding and maintaining the integrity of the marine ecosystem of Alaska through research, rehabilitation and education.</p> <p>www.alaskasealife.org</p>	224-6300 224-2525	<p>Alaska Sealife Center 301 Railway Seward, AK 99664</p>
<p>Alaska Wildlife Alliance (AWA)</p> <p>AWA is a non-profit organization whose mission is the protection of Alaska’s natural wildlife for its intrinsic value as well as for the benefit of present and future generations. The Alliance advocates an ecosystem approach that represents the non-consumptive values of wildlife.</p> <p>www.akwildlife.org</p>	227-0897	<p>Alaska Wildlife Alliance (AWA) P.O. Box 202022 Anchorage, AK 99520</p>
<p>Alaska Wildlife Response Center (AWRC)</p> <p>AWRC is a program of the International Bird Rescue Research Center (IBRRC) which is recognized throughout the world as the leader in oiled wildlife rescue and rehabilitation. Major funding for the AWRC is provided by the Alyeska Pipeline Service Company and Alaska Clean Seas.</p> <p>www.ibrrc.org/Alaska_center.html</p>	562-4852 562-1326 local #'s only when required	<p>Alaska Wildlife Response Center (AWRC) 6132 Nielson Way Anchorage, AK 99518</p>
<p>Alaska Women’s Environmental Network</p> <p>AWEN is a program of the National Wildlife Federation Alaska office. AWEN creates networking opportunities and training programs to promote women’s leadership in Alaska’s</p>	258-4810	<p>Alaska Women’s Environmental Network (AWEN) 750 W. 2nd Ave. Ste. 200</p>

Organization/Description/Website	Phone	Mailing Address
conservation efforts and to create strategic alliances to more effectively achieve protection of Alaska's rich natural heritage. www.nwf.org/women		Anchorage, AK 99501
American Lung Association of Alaska Promoting lung health and preventing lung disease in Alaska. www.Aklung.org	276-5864	American Lung Association of Alaska 500 W. Int'l Airport Rd. Suite A Anchorage, AK 99518
Center for Alaskan Coastal Studies A non-profit organization with a mission of fostering responsible interactions with our natural surroundings and generating knowledge of the marine and coastal ecosystems of Kachemak Bay through education, research, and stewardship. www.akcoastalstudies.org	235-6667	Center for Alaskan Coastal Studies P.O. Box 2225 Homer, AK 99603
Clean Air Store Provides products for indoor air pollution control and for contaminated ground water clean-up.	561-2735	Clean Air Store 230 E. Potter Drive Anchorage, AK 99518
Cook Inlet Keeper A private, non-profit organization dedicated to protecting the Cook Inlet watershed and the life it sustains. Keeper's programs unite individuals and groups through water quality monitoring, environmental education, and effective advocacy, to give citizens the tools they need to promote clean water in the Cook Inlet watershed. www.inletkeeper.org	235-4068	Cook Inlet Keeper P.O. Box 3269/3734 Ben Walters Lane Homer, AK 99603
Cook Inlet Regional Citizens' Advisory Council The mission of the Council is to represent the citizens of Cook Inlet in promoting environmentally safe marine transportation and oil facility operations in Cook Inlet. www.circac.org	283-7222	Cook Inlet Regional Citizens' Advisory Council (CIRCAC) 910 Highland Ave. Kenai, AK 99611
Copper Country Alliance Formed in 1992 to enable residents and friends of the region to speak with a unified voice to protect its rural and wild character. Present concerns include oil pipeline safety; land planning; road, rail and river issues; the future of Wrangell-St. Elias National Park, McCarthy Road, and other issues. www.copperriver.org	822-3644	Copper Country Alliance HC 60 Box 306-T Copper Center, AK 99573
Copper River Watershed Group Provides residents with a forum to consider and implement innovative approaches for achieving	424-3334	Copper River Watershed Group P.O. Box 1560

Organization/Description/Website	Phone	Mailing Address
balance between a diverse economy and healthy ecosystems while maintaining quality of life and cultural heritage. www.copperriver.org		Cordova, AK 99574
Earthjustice Established in 1978 with a mission to protect natural attributes of the Great Land. Attorneys have brought important litigation to defend natural resources throughout the vast state on behalf of a broad and diverse group of clients. www.earthjustice.org/regional.juneau/index.html	586-2751	Earthjustice 325 Fourth Street Juneau, AK 99801-1145
Greenpeace USA The leading independent campaigning organization that uses non-violent direct action and creative communication to expose global environmental problems and to promote solutions that is essential to a green and peaceful future. www.greenpeaceusa.org	277-8234	Greenpeace USA P.O. Box 104432 Anchorage, AK 99510
National Audubon Society Audubon's mission is to conserve and restore natural ecosystems, focusing on birds, other wildlife, and their habitats for the benefit of humanity and the earth's biological diversity. www.audubon.org	276-7034	National Audubon Society 308 G Street #217 Anchorage, AK 99501
National Wildlife Federation The nation's largest membership-supported conservation group, uniting individuals, organizations, businesses and government to protect wildlife, wild places, and the environment. www.nwf.org	258-4800	National Wildlife Federation 750 W. 2 nd Ave. #200 Anchorage, AK 99501
The Nature Conservancy of Alaska To preserve plants, animals & natural communities that represent the diversity of life on Earth by protecting the lands & waters they need to survive. www.alaska@tnc.org	276-3133	Nature Conservancy of Alaska 421W. 1 st Ave, Ste 200 Anchorage, AK 99501
Northern Alaska Environmental Center Promotes conservation in interior and Arctic Alaska through advocacy, education, and sustainable resource stewardship. www.northern.org	452-5021	Northern Alaska Environmental Center 218 Driveway Street Fairbanks, AK 99701
Oil Spill Recovery Institute (OSRI) To identify and develop the best available techniques, equipment and materials for dealing	428-5800	Oil Spill Recovery Institute P.O. Box 705

Organization/Description/Website	Phone	Mailing Address
with oil spills in the Arctic and subarctic marine environment; and, to complement Federal and State damage assessment efforts and determine, document, assess and understand the long-range effects of environment and economy of the Sound. www.pwssc-osri.org		Cordova, AK 99701
Prince William Sound Conservation Alliance The only statewide forum that unites the Alaska conservation community for maximum impact and effectiveness. www.akvoice.org	835-2799	Prince William Sound Conservation Alliance 310 Egan Box 1697 Valdez, AK 99686
Prince William Sound Keeper		
Prince William Sound Regional Citizens' Advisory Council (PWSRCAC) An independent non-profit corporation guided by its mission; citizens promoting environmentally safe operation of the Alyeska Pipeline marine terminal in Valdez and the oil tankers that use it. www.pwsrcac.org	Valdez 835-5957 Anchorage 277-7222	PWSRCAC P.O. Box 3089 Valdez, AK 99686 Or 3709 Spenard Road Anchorage, AK 99503
Prince William Sound Science Center An independent research and education institution with a threefold mission: contribute to the description, monitoring and ecological understanding of the Sound, the Copper River, and Gulf of Alaska; promote the goal of maintaining long-term, self-regulating biodiversity, productivity and sustainable use of renewable resources; educate and inform youth and the general public about the critical interdependence of the biology and regional economies of Alaska. www.pwssc.org	424-5800	Prince William Sound Science Center P.O. Box 705 Cordova, AK 99574
Sierra Club - Alaska Chapter The Sierra Club's members are 700,000 friends and neighbors inspired by nature, who work together to protect our communities and the planet. www.sierraclub.org	276-4048	Sierra Club - AK Chapter 201 Barrow Street Anchorage, AK 99501
Trustees for Alaska A public interest law firm whose mission is to provide legal counsel to sustain and protect Alaska's natural environment. They represent local and national environmental groups, Alaska Native villages and nonprofit organizations, community groups, hunters, fishers and others.	276-4244	Trustees for Alaska 1026 W. 4 th Avenue Anchorage, AK 99501

Organization/Description/Website	Phone	Mailing Address
www.trustees.org		
The Wilderness Society The group works to protect America's wilderness and to create a network of wild lands enhanced by public education, scientific analyses and advocacy. www.wilderness.org	272-9453	Wilderness Society 430 W. 7 th Ave, Ste 210 Anchorage, AK 99501

Fishing Fleet Organizations

Alaska Crab Coalition

P.O. Box 1732
 Kodiak, AK 99615
 487-2248

Alaska Shellfish Growers Association

www.alaskashellfish.com
 P.O. Box 20704
 Juneau, AK 99802-0704

Alaska Trollers Association

130 Seward Street Suite 505
 Juneau, AK 99801
 586-9400

At Sea Processors Association

431 W. 5th, Suite 103
 Anchorage, AK 99501
 276-8252

Cordova District Fishermen United

P.O. Box 939
 Cordova, AK 99574
 424-3447

Kenai Peninsula Fishermen Association

34824 Kalifornsky Beach Rd., Suite E
 Soldotna, AK 99669
 262-2492

North Pacific Fisheries Association

PO Box 1272
 Homer, AK 99603-1272
 235-8712

Prince William Sound Aquaculture Corporation

P.O. Box 1110
 Cordova, AK 99574
 424-7511

Women's Fisheries Network

2442 NW Market St., Suite 243
 Seattle, WA 98107
 206 789-1987

A more complete listing of organizations can be found at the following websites:

United Fishermen of Alaska

www.ufa-fish.org

Alaska Fisherman's Journal

www.afjournal.com/marinedirectory

The Fishermen's News

www.fishermensnews.com/organization.html

Alaska Native Organizations

The first table lists the 12 Native Regional Corporations formed under the Alaska Native Claims Settlement Act and the second table lists the Regional Non-Profit organizations for our communities. The Department of Community and Economic Development (located in Juneau, 907-465-4750) also maintains a website of community contacts:

http://www.dced.state.ak.us/cbd.commdb/CF_CIS.cfm

Alaska Native Regional Corporations

Corporation Name General Location	Address	Telephone Number
Ahtna Incorporated/ Copper River Basin	406 Fireweed Lane Anchorage, AK 99503	272-7961
Aleut Corporation/ Aleutian Islands	4000 Old Seward Hwy #300 Anchorage, AK 99518	561-4300
Arctic Slope Regional Corp./North Slope, N. AK	301 Arctic Slope Ave. Anchorage, AK 99518	349-2369
Bering Straits Native Corp./Norton Sound, Seward Peninsula	P.O. Box 1008 Nome, AK 99762	443-5252 443-2985 (Fax)
Bristol Bay Native Corp./ Bristol Bay, Dillingham	800 Cordova St Anchorage, AK 99501	278-3602
Calista Corporation/ Western Alaska	301 Calista Ct Anchorage, AK 99518	279-5516
Chugach Alaska Corporation/ Prince William Sound, Seward	560 E. 34 th Ave. Anchorage, AK 99503	563-8866
Cook Inlet Regional Corp./Mat-Su, Anchorage, Kenai	P.O. Box 93330 Anchorage, AK 99509	274-8638 279-8836 (Fax)
Doyon Limited/ Interior, Central Alaska	1 Doyon Place Suite 300 Fairbanks, AK 99503	452-4755
Koniag Incorporated Kodiak Area	4300 B St. Anchorage, AK 99503	561-2668
Nana Regional Corp./ Northwest Arctic Borough	1001 E. Benson Blvd. Anchorage, AK 99508	265-4100
Sealaska Corporation/ Southeast Alaska	One Sealaska Plaza #400 Juneau, AK 99801	586-1512

Regional Non - Profit Organizations

Community	Regional Non-profit	Address	Phone
Akhiok Karluk Kodiak Larsen Bay Old Harbor Ouzinkie Port Lions	Kodiak Area Native Association KANA	3449 E. Rezanof Dr. Kodiak, AK 99615	486-9800
Chenega Bay Cordova Nanwalek Port Graham Seward Tatitlek Valdez	Chugachmiut. Inc.	4201 Tudor Centre Dr., Ste 210, Anchorage, AK 99508	562-4155
Kenai/Soldotna	Cook Inlet Tribal Council, Inc.	670 W. Fireweed Lane Anchorage, AK 99503	265-5900

Unlisted Village Corporations

(These corporations do not have a village location.)

Anton Larsen, Inc.

Bells Flats Natives, Inc.

Shuyak, Inc.

Uyak, Inc.

AyaKulik, Inc.

Litnik, Inc.

Uganik Natives, Inc.

Consultant Resources in Disaster Mental Health

Consultant Resources in Disaster Mental Health

Dr. Steve Picou & Kati Arata
University of South Alabama
Humanities Bldg., Rm 34
Mobile, AL 36688-0002
334-460-6347

Stop Gap Therapeutic Theater
Don R. Laffoon, Executive Director
1570 Brookhollow Dr., #114
Santa Ana, CA 92705
(714) 979-7061
(714) 979-7065 Fax

Diane Myers, RN, MSN
Consultant in Disaster Mental Health
And Trauma Recovery
24 Elk Run
Monterey, CA 93940
(408) 373-4147
(408) 373-5651 Fax

Robert S. Pynoos, Associate Professor
Dept. of Psych. & Behavioral Sciences
University of California, Los Angeles
300 Medical Plaza
Los Angeles, CA 90024-6968
(310) 206-8973
(310) 206-4310 Fax

Klein Associates, Consultants in CISD
1131 Binghampton Circle
Huntington Beach, CA 92646
(714) 964-5779
(714) 963-3359 Fax

Julia Parisian
Pediatricare
Oakland, CA
(510) 339-2986

Duane A Gill, Associate Professor
Dept. of Sociology, Anthropology, & Social
Work
P.O. Box 5287
MSU, Mississippi 39762

Dr. John Battaglia
Dept. of Health & Social Services
Mental Health & Dev. Disabilities
2900 Providence Drive
Anchorage, AK 99508
269-7153

Leonard M. Zunin, M.D
Disaster Specialist & Assistant to Director
California Dept. of Mental Health
1600 9th St.
Sacramento, CA 95814
(916) 654-1234
(916) 654-2804 Fax

Josie T. Romero, Manager
Mental Health Administrator
County of Santa Clara Health Dept.
2695 Moorpark Avenue
San Jose, CA 95128
(408) 299-6130 wk.
(408) 281-3346 hm.

Nancy Fernandez, Disaster Coordinator
Alameda County Mental Health Service
4530 Tompkins Ave.
Oakland, CA 94619

Teaching Materials in Disaster Mental Health

Teaching Materials in Disaster Mental Health

Videos/Films

Adventures of the Disaster Dudes. Education video for children on the importance of preparing for disasters. American Red Cross/FEMA. FEMA VT-ARC 5024V. 13 min., 3 segments. 4th-6th Grades.

Disaster Sights and Sounds. American Red Cross. 8 min. film, 16 mm. This film shows actual scenes from various disasters, including flood, tornado, and hurricane, with both disaster victims and disaster workers functioning in various settings. Contact local chapter of American Red Cross.

Facing the Fire: An Inside Look at a Red Cross Disaster. American Red Cross Operation 23:39. Stock No. A4495.

Friends. State of California Department of Mental Health. 9 min. film, 16mm, 3/4" video, 1/2' VHS, beta. Documentary and dramatic sequences in this upbeat film emphasizes the importance of friendships in times of high stress. It interweaves comments from professionals of all ages about the value of friends. It also contains a brief discussion of the medical evidence regarding health and social support networks. Contact: California Department of Mental Health Film Library, 1600 9th St., Sacramento, CA 95814.

How Do They Do That? Nov. 1993. 7 min. Harry Delleskamp, Assistant Director, Red Cross, Orange County, 601 N. Golden Circle Dr., PO Box 11364, Santa Ana, CA 92711-1364. (714) 835-5381. Fax (714) 547-7903.

Human Response to Disaster: Training Emergency Service Workers. Diane Garaventa Myers, William T. O'Callahan and Jack Peuler. Produced by the National Institute of Mental Health and State of California Department of Mental Health, in cooperation with FEMA. Six, 20 min. 1/2" videocassettes. This series of videotapes provides a comprehensive overview of mental health issues in disasters. It was designed to assist mental health workers, emergency service workers, and disaster workers from voluntary disaster relief agencies in understanding and meeting the psychological needs of disaster victims and workers. Contact: Center for Mental Health Studies of

Emergencies, National Institute of mental Health, Room 6C-12, Parklawn Building, 5600 Fishers Lane, Rockville, MD 20857. (303) 443-1910.

The Hyatt Disaster: The Hidden Victim. Produced by Margaret S. Miles, School of Nursing, University of Kansas Medical Center, and Alice S. Demi, Medical College of Georgia. 51 min. 1/2" video. Victims of the 1981 skywalk collapse at the Hyatt Regency Hotel in Kansas City discuss their reactions to the disaster. A television news reporter, an employee of the hotel, a husband and wife who were guests at the hotel, and an emergency medical technician share their feelings about the events that took place at the scene and in the year following the disaster. Ways they coped with their feelings are discussed. Contact: The Education Resource Center, Room G004, Orr-Major Hall, 39th and Rainbow Blvd., The University of Kansas Medical Center, Kansas City, KS 66103. (913) 588-7343.

Make Yourself a Promise – Earthquake Preparedness for Yourself and Your Community. 27 min. Governor's Office of Emergency Services (OES), S. CA Earthquake Preparedness Project (SCOPE), 1350 Front St., Ste. 4015, San Diego, CA 92101. (619) 525-4287.

Peer Listener Training Program, two and a half hour video component of the "Coping with Technological Disasters Guidebook." The program has four parts: 1) Disaster Research, 2) Human Impacts of Disasters, 3) Communication Skills, and 4) Being a Peer Listener and is designed to train local residents to provide help to disaster-impacted communities. Prince William Sound Regional Citizens' Advisory Council, with funding support from the Oil Spill Recovery Institute and the Cook Inlet Regional Citizens' Advisory Council. PWSRCAC, 3709 Spenard Road, Anchorage, AK 99503. 1-800-478-7221.

Voices of Wisdom: Seniors Cope With Disaster. Suzanne Mooney. 31 min. San Bernardino County Dept. of Mental Health, 700 E. Gilbert St., Bldg. 5, San Bernardino, CA 92415.

Books/Booklets

Books for Young Children:

Anna, Grandpa, and the Big Storm. Carla Stevens. New York: Clarion Books, 1982.

The Butter Battle Book. Dr. Seuss. New York: Random house, 1984.
Dennis the Menace – Coping with Family Stress.
Earthquake Activity Book I, Grades K-2 (English and Spanish)
Earthquake Activity Book II, Grades 3-6 (English and Spanish)
Earthquake Safety – Activities for Children: FEMA
Safety and Survival Coloring Book
Yogi Bear Coloring Book – “Color Us Scared”

Books for Disaster Workers:

Coping with Disaster: The Media
Coping with Disaster: The Medical Community
Disaster Work and Mental Health: Prevention and Control of Stress Among Worker: A Pamphlet for Team Managers. Don M. Harteough and Diane G. Myers. DHHS Pub. No. (DAM) 85-1422
Prevention and Control of Stress Among Workers: A Pamphlet for Team Managers. DHHS Pub. No. (ADM) 87-1496.
Prevention and Control of Stress Among workers: A Pamphlet for Workers. DHHS Pub. No. (ADM) 87-1496.
Prevention and Control of Stress Among Workers: NIMH.

Books for Teachers/Parents

Child Support Through Small Group Counseling, Lois Landy.
Children Who Grieve, Roberta Beckmann.
Coping with Children’s Reactions to Earthquakes and Other Disasters. FEMA. (8 pages, 1986) Contact: FEMA, Pub. #48 (English) or #66 (Spanish), PO Box 70274, Washington, DC 20024.
Coping with Children’s Reactions to Hurricanes and Other Disasters. FEMA. (5 pages, 1989) Contact: FEMA, Pub. # 184 (English) or # 185 (Spanish), PO Box 70274, Washington, DC 20024.
Coping with Disaster: Adolescents.
Coping with Disaster: Teens Help Teens Heal.
Helping Children with their Fears when Disasters Strike.
How to Help Children After a Disaster – A Guidebook for Teachers.
Manual for Child Health Workers in Major Disasters: NIMH.
Pre-School-Age Children: Common Disaster Reactions and Coping Strategies
Something Bad Happened, Debra Whiting Alexander, Ph.D.
Something Bad Happened Leader Guide, Debra Whiting Alexander, Ph.D.
Trauma in the Lives of Children, Kendall Johnson, Ph.D.

Books for the General Public

Don't Pop Your Cork on Monday, Adolph Moser, Ed.D.

Earthquake Preparedness – My Personal To Do List

The Relaxation and Stress Reduction Leaders Guide, Martha Davis, Ph.D.

The Relaxation and Stress Reduction Workbook, Martha Davis, Ph.D., Elizabeth Robbins Eshelman, M.S.W., Matthew McKay, Ph.D.

Books for Seniors

Earthquakes – A Survival Guide for Seniors

Scriptograph Booklets

About Anger

About Emotional Abuse and Neglect of Children

About Grief

About Stress Management

About the Sexual Abuse of Children

Emotional Abuse – Words Can Hurt

Good Ways to Raise Good Kids

I Hear You

Let's Talk About Drugs

Parents and Stress

Sobre El Amor Propio

Sobre la Tension

Sobre la Violencia en el Hogar

Sobre las Habilidades de ser Madre o Padre

Stress and the Older Person

Stress and Your Child

Thinking About Drugs? Think About This...

What Everyone Should Know About Stress

Audio Cassettes

Diane Myers – Partners in Disaster Workshop, San Bernardino, May 14, 1993

Josie Romero – Partners in Disaster Workshop, San Bernardino, May 14, 1993

Relaxation and Stress Management Program. 3 audiotapes and a 52-page guide to stress management. Contact: Stress Management Research Associates, Inc., PO Box 2232-B, Houston, TX 77251. (713) 890-8575.
Sesame Street Tape, "Beatin' the Quake."

Games

Not So Scary Things

Stress Strategies

The Community Fact Sheet

An Example

Cordova Fact Sheet

Current and Up-to-date Oil Spill Recovery Information

City of Cordova

April 17, 1989

Vol. 1, No. 3

A Message from the Mayor

Cordova is tough . . . and together!
 The effort put forth by Cordovans individually and collectively in battling the Exxon tanker oil spill catastrophe in PWS is one of the biggest success stories of this disaster. Every Cordovan can feel good about their effort and contribution, whether it's been at home, on the Sound, at an office or elsewhere in the field!
 Now, to help us with recovery, the Disaster Assistance Center (DAC) has been opened at the Bidarki Center gym. It will remain open this Monday and Tuesday, April 17 and 18, so visit soon. Every Cordovan is welcome to visit the DAC. Tables are set up representing the different offices that can help you with a wide range of matters. You can get assistance with legal matters, business and housing loans, food stamps, fishing permits, child care matters, and more. You can get help filling out forms for assistance. There is no charge for help and there is coffee, too!
 The DAC is probably the single biggest collection of agencies able to help us under one roof at one time in a couple of decades in Cordova. Thanks to the Alaska Division of Emergency Services and the participating agencies for coming to help Cordova.

Mayor Erling Johansen, City of Cordova—4/17/89

Oil Spills Over to IRS

Contributions made to federal, state or local governments are tax-deductible if the gifts are only for public purposes. Charitable contributions are deductible on Schedule A for those that itemize their deductions.
 "Since the oil spill in Prince William Sound, the Anchorage IRS office has received many calls from Alaskans asking if funds they wished to contribute to help clean up the oil spill or prevent further damage can be used as a deduction on their income tax returns," said Robert W. Brock, Alaska District Director for the Internal Revenue Service. "The calls have been received from taxpayers and also from representatives of local governments."
 Taxpayers should keep receipts of any contributions they make and keep them with the 1989 tax records they retain for completing their 1989 federal income tax returns. Publication 526, *Charitable Contributions* has additional information. Copies of the publication are available by calling toll-free 1-800-424-FORM (3676).

Anchorage Office Internal Revenue Service—4/11/89

Spill-Related Offices

City of Cordova Oil Spill Response Office	City Hall (upstairs)	424-6247, 6248, 6242
DAC (Disaster Assistance Office)	All located in Bidarki Rec. Center	424-5915
	Community Affairs, Small Business Administration, Alaska Legal Services	
Exxon Claims Office	Room 204 of the Reluctant	424-4204
Exxon Operations - Dave Pierce	City Hall (upstairs)	424-6334, 6384
Exxon Liaison - D. J. Moon		424-6334, 6384
Harbor Master - Boat Cleaning		424-6400
ADF&G Fisheries Assessment Program	AC Building	424-5902
Alaska Job Service - Phyllis Lape	Bidarki Rec. Center	424-5914
Congressional Delegation - Becky Chapek	Federal Building	424-5970, Fax 424-5271
CDFU (Cordova District Fishermen United)	First Street	424-3447
PWSAC (Prince William Sound Aquaculture Corporation)	First Street	424-7511
Governor's Office - Mary Ellen Tiffany	City Hall (upstairs)	424-6231
Cordova Wildlife Rescue Fleet - Kelly Weaverling	Diamond Building	424-5925, 5926
VECO Hiring - Fred Clingman	Masonic Temple	424-5770, 5928
Cordova Fact Sheet - Connie Taylor		424-5951, Fax 424-3899

Exxon Settlement Policy

Excerpts from presentation by D.E. Cornett, Alaska Coordinator for Exxon Company, U.S.A., before the Senate Special Committee on Oil and Gas, Juneau, Alaska. Thursday, April 13, 1989.

We intend to provide fair, reasonable and prompt settlements to those who were damaged by the spilled oil. Claims arising from the oil spill will be expeditiously processed by offices in Valdez, Cordova and Homer. While we are hopeful other areas will not be significantly affected, additional offices will be established in Kodiak, Seward and other communities if needed.

Claims for both property damages and for loss of income are being received. Loss of income claims will be processed for individuals and businesses that lose net income because of their reduced ability to use the natural resources of Prince William Sound as a direct result of the discharge of oil. These will include fishermen, hatcheries, canneries and others who have been directly impacted by the spilled oil. We know there will be some claims filed by a few who were not damaged and we will not pay those. However, it is our intent to reimburse those who were actually and directly damaged by the spilled oil.

In order to support a claim, reasonable documentation will, of course, be required. Such documentation may include federal income tax returns, permits to fish, fish delivery tickets, contracts with processors, employment certification from employers, or other valid records which support the amount claimed.

A three step payment procedure has been placed into operation — advances, partial payments, and final settlements — to expedite the flow of cash.

In order to provide payments for those in need of immediate cash, a cash advance system is in place. With minimum documentation to establish the validity of a claim and the need for immediate cash, advances are being made with a receipt requested and the granting of the right to offset against subsequent settlements. The individuals receiving the advance give up none of their rights but receive partial payment toward the ultimate amount.

Partial settlements can be effected to settle claims for events that have already occurred such as the closing of the herring season. Under this procedure a final settlement is negotiated, the full amount is paid and a release is obtained only for the event being settled. Individuals give up none of their claim damages from any other events.

Final settlements will be negotiated as soon as all the factors are known and documentation can be finalized.

Special financing arrangements are being developed to assist in solving the cash flow problems of businesses such as canneries. The arrangements will be made through Alaska banks to the maximum extent possible.

Other steps such as maximizing the use of local procurement, local hiring, and expedited payment processing for invoicing have also been implemented.

All of the efforts have been put in place to mitigate, to the extent possible, the economic impact on those individuals and companies directly affected by the oil spill.

We are hopeful that most can be handled to the satisfaction of the claimant through this process. However, for those few cases where agreement cannot be reached, we support voluntary arbitration by a panel to be selected by Exxon and the claimant. It is important that the arbitration alternative be agreed by both parties and that both are assured of a fair hearing by an impartial group of arbitrators. We understand legislation along these lines was introduced this morning.

Anyone having a claim is encouraged to contact the nearest Exxon claims office and we promise to give expedited consideration to their claim.

Don Cornett, Alaska Coordinator for Exxon—4/13/89

Exxon Cordova Report

The Cordova Exxon Oil Spill Operations Office will be moving to the old Service Transfer building on Second Street early the week of April 17. Telephone numbers will remain the same. Boom contingency plans for the Hawkins Island cutoff have been included in the spill clean up plan submitted to the Coast Guard.

Fifty cases of oil snare are being sent to Main Bay Hatchery and Eshamy Bay.

Exxon's oil spill accountant will be in Cordova Tuesday, April 18, to pick up invoices. Checks will be returned the following Tuesday, April 25.

Cordova Exxon Oil Spill Operations Office—4/16/89

Alaska Department of Environmental Conservation Report

The following is excerpted from a multi-page report of the Alaska Department of Environmental Conservation dated April 14, 1989.

ADEC made arrangements April 14 to turn over all air logistics support functions to the Division of Emergency Services (DES). All other logistics functions are to be turned over to DES over the coming week. . . .

Sawmill Bay: Reports of the contractor crew at Sawmill Bay, as well as overflight reports, continue to indicate that the bay is in very good shape. The state currently has an inventory or approximately 15,000 feet of containment boom in the bay. . . . A boom washing facility has been re-instituted at dockside with the blessing of the Chenega Village Council. Restrictions placed on the cleaning operation include adequate containment and use of proper materials. Cleaning of Navy skimmers will not be allowed at this site.

Main Bay and Eshamy Bay: The CDFU currently has a VRCA contractor on-site directing the activities of three CDFU vessels. Their mission is the tend the boom deployed at Main Bay and Eshamy Bays. Approximately 2,000 feet of state containment boom are deployed at each location.

Herring Bay/Northwest Bay: The vessels Aurora, Cape Douglas and Cygnet were relocated to Northwest Bay this morning with the consent of Exxon, USCG and the state. The Aurora carries 25 emergency hires and 12 support and supervisory personnel. The Cape Douglas is equipped with a super sucker vacuum under contract to CDFU.

Water quality monitoring: ADEC currently has personnel participating in monitoring activities with Exxon contractor, American North, Inc. Two vessels are supporting water sampling and one vessel is supporting sediment sampling. Activities include both screening tests on-site and collection of samples for laboratory analysis.

Shoreline: To date, ADEC shoreline surveys have identified, surveyed, mapped and cataloged over 50 shoreline areas. Updated maps and lists are provided to Exxon and participants of the shoreline cleanup committees to use with established resource sensitivity maps.

Shoreline cleanup: ADEC personnel have been observed shoreline cleaning methods involving manual removal and pressure washing. Observers indicated improvement to cobble beach area after medium pressure wash; improvements in boom height and draft to better contain material from beach recommended; pressure wash does create turbidity in adjacent waters and must be better contained.

Short term focus: 1. Maintain booming, skimming and recovering operations. Emphasis on Port Nellie Juan, Pt. Helen and Herring Bay. 2. Continue adding equipment/manpower in areas needing attention, i.e., Herring Bay, Northwest Bay and Crafton Island. 3. Maintain scheduled surveillance flights to maximize effective utilization of cleanup operations.

Alaska Department of Environmental Conservation—4/14/89

Herring Evaluation

The Alaska Department of Fish and Game is currently coordinating an effort to document adult herring mortality in Prince William Sound. A survey team is organized and will be dispatched to reported herring kill sites to collect samples and visually inspect the extent of the mortality.

If you have information concerning herring die off, please contact James Brady or Bob Karlen at ADF&G in Cordova. 907-424-3213, VHF 16 and SSB 2509.

Specific location and information about kill sites is critical. Coordinates, date and time the kill was observed, and your name and where you can be reached would be appreciated and will help ADF&G respond promptly.

Alaska Department of Fish and Game, Cordova—4/89

CDFU PR Policy

If you have any information for the CDFU public relations people, Ken Adams or Michelle O'Leary, please write down the facts, time and date. Make certain your facts are brief and accurate. Mail or delivery your information to CDFU, Box 939, Cordova, 99574.

Cordova District Fishermen United—4/14/89

CDFU Response Fund

CDFU has established an Oil Spill Response Fund and are currently receiving donations from around the country. The fund will be used to address actions in three major areas: documentaion and monitoring of the spill and cleanup efforts, to facilitate scientific research, to facilitate oil spill cleanup and environmental restoration.

Cordova District Fishermen United—4/16/89

**Cordova
Disaster
Assistance
Center**

The Alaska Division of Emergency Services is coordinating the establishment of a centralized disaster assistance center in Cordova. Located in the gymnasium of the Bidarki Recreation Center, the Disaster Assistance Center will operate from Saturday, April 15, through Tuesday, April 18, 9 a.m. to 9 p.m.

The following agencies will be represented in the Center to provide applications and information assistance on programs they administer.

Alaska Division of Emergency Services
Alaska Department of Community and Regional Affairs
-Housing Loan Information
-Child Care Licensing
-Child Care Assistance

DCRA Housing Loan Information: 1-800-478-4585

Alaska Housing Finance: 1-800-468-AHFC

Small Business Administration: 1-800-468-1710

-Economic Injury Loans

Department of Commerce and Economic Development,
Division of Investments

-Fishing Loan Information

-Fisheries Enhancement

Alaska Legal Services

-Legal Assistance

Alaska Dept. of Health and Social Services

-Welfare Assistance Programs

Department of Family & Youth Services

-Child Care

After April 18 the Alaska Division of Emergency Services will staff a Cordova Disaster Assistance Office on a continuing basis. This office, also located in the Bidarki Center, will provide information and referral services regarding State Disaster Assistance Programs. Business phone number is 424-5915.

Alaska Division of Emergency Services—4/15/89

**Upcoming
Meetings**

10 a.m., Monday, April 17 — Internal Revenue Service at the Library

9 a.m., Monday, April 17 — Child Care Meeting at the Hospital Conference Room

7:30 p.m., Monday, April 17 — City Council Meeting at the Library Meeting Room

12 noon, Tuesday, April 18 — Chamber of Commerce at the Powder House

7:30 p.m., Wednesday, April 19 — Alaska Seafood Marketing Institute at Mt. Eccles Elementary

**Cordova Fact Sheet
P.O. Box 1276
Cordova, Alaska 99574**

Bulk Rate U.S. Postage PAID Cordova, AK Permit No. 12

To All Cordovans

Appendix I

Project References

Following you will find project references organized as follows:

- Types of Disaster
- Aviation Disasters
- Technological Disasters
- Case Studies in Disaster
- Post-Traumatic Stress Disorder
- Anniversary Reactions
- Children and Disaster
- Families in Disaster
- Disasters and the Elderly
- Ethnicity, Religion, and Race
- Disaster Relief Workers
- Disaster Services
- Disaster Planning
- Reconstruction and Disaster Recovery
- Sociological and Organizational Studies
- Politics and Public Policy
- Public Health Perspectives
- Exxon Valdez Oil Spill
- Socioeconomic and Subsistence

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Aviation Disasters

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Appendix J
“Chronic Psychological Impacts of the Exxon Valdez Oil Spill: Resource Loss and Commercial Fishers”

Following is a research report prepared by J. Steven Picou and Catalina M. Arata describing the research used to identify specific psychological symptoms experienced by commercial fishers who were impacted by the 1989 Exxon Valdez oil spill. This information was required to help design the larger community education intervention program that is described in chapter two of the “Coping with Technological Disasters” Guidebook and also in Appendix K.

Chronic Psychological Impacts of the *Exxon Valdez* Oil Spill:
Resource Loss and Commercial Fishers*

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FINAL REPORT

*Final research report in partial fulfillment of Contract No. 7.4021.702, Prince William Sound Regional Citizens' Advisory Council. The authors thank Duane A. Gill, Scott McNally and Dan Dennard for their many contributions to the completion of this report. The technical assistance provided by Linda Burcham throughout this project is gratefully acknowledged. The contents of this report are the responsibility of the authors and do not necessarily reflect the policy or position of the Prince William Sound Regional Citizens' Advisory Council.

Executive Summary

1. This research was conducted as part of a larger project which field-tested a community education intervention program for reducing the chronic social impacts of the *Exxon Valdez* Oil Spill (*EVOS*).
2. The objectives of this research included the identification of chronic psychological symptoms experienced by commercial fishers and an analysis on the relationship of resource loss to severity of psychological distress.
3. The mental health impacts of the *EVOS* are similar to impacts observed for other technological disasters (e.g., Three-Mile Island, Love Canal, Bophal). Social and psychological impacts of these events persist for years and include community conflict, work disruption and various manifestations of psychological distress. Research documents, that approximately four years after the *EVOS*, social disruption and spill-related stress still characterize commercial fishers. These earlier studies identified commercial fishers as an occupational group at high risk for experiencing continuing, long-term social impacts.
4. Using the Conservation of Resource (COR) model, stress was defined as an individual's reaction to the environment, which involves the threat of resource loss, an actual loss of resources, or the lack of gain following investment of resources. Resources include "money," "objects," "conditions," and "personal characteristics." Both actual and perceived losses have been found to produce stress-responses among disaster victims. The COR model suggests that various kinds of resource loss will be associated with the severity of psychological distress. This research evaluated this general hypothesis for commercial fishers.
5. The data for this study were obtained from commercial fishers residing in the community involved in the field-test of the intervention program. A list of commercial fishers was obtained and surveys were mailed to 446 individuals. Data were collected from 125 commercial fishers, reflecting a response rate of 28 percent. For current members of the Cordova District Fishermen United (CDFU), the response rate was 37 percent.
6. Assessment of psychological distress was made using standardized psychological scales. Spill-related stress was measured by the Impact of Events Scale (IES). Specific types of psychological problems were identified from responses to the Symptoms Checklist 90-Revised (SCL90-R) Inventory. This inventory allows the comparison of observed scores to those found for nonpatient populations and the identification of severe symptoms. The analysis in this report focuses on the following stress-responses -- depression, anxiety, hostility and post-traumatic stress disorder (PTSD).
7. The analysis of the data revealed, for the commercial fishers interviewed, that 20 percent had severe anxiety, 40 percent had severe depression and 14 percent had significant levels of hostility. Spill-related PTSD was assessed using multiple measures of symptom based responses and 37 percent were found to meet the criteria for the diagnosis of PTSD. Over half of the respondents (52.1%) had severe depression, PTSD or a combination of predominant symptoms.
8. As suggested by the COR stress model, resource loss was measured by indicators of "financial," "objective," "conditions" and "personal" resources. Following an average income gain of \$39,382

in 1989, commercial fishers reported financial losses from 1990 to 1994 which averaged \$214,689. This economic loss spiral was found to characterize approximately 35 percent of the commercial fishers interviewed.

9. Severe depression and PTSD were found to be associated with “being in an economic loss spiral,” “having sold possessions” and by having “made economic investments without gain” over the last six years. High levels of depression and PTSD were found to characterize commercial fishers who had experienced economic (financial) resource losses.
10. The loss of “conditions resources” were measured by the deterioration of family relations and the breakdown of relationships with relatives and friends. Overall, a majority of the respondents classified as having severe depression or PTSD reported a decline in their social relationships and adverse impacts of the *EVOS* on their families.
11. The loss of “personal resources” was measured by self-reports of having personally experienced more physical and emotional health problems since the *EVOS*. A majority of respondents who were severely depressed or diagnosed with PTSD reported “more physical health problems.” All respondents who reported “more emotional health problems” were classified as being severely depressed. The vast majority of these in the high PTSD category also reported “more emotional health problems” since the *EVOS*.
12. Long-term social and psychological impacts of the *EVOS* have persisted for over six years. Psychological symptoms observed for commercial fishers included severe anxiety, hostility, depression and PTSD. Economic, social, and personal resource loss was associated with high levels of depression and PTSD. The results replicate those of previous studies of technological disasters and expand studies of the mental health impacts of the *EVOS*.
13. The findings of this study have implications for the design and development of intervention programs for mitigating the chronic social impacts of technological disasters, in general, and in particular for future oil spills in Prince William Sound, Alaska. The major implications are listed below:
 - Community outreach activities should be the basis for program design.
 - Educational materials should focus on identifying coping skills for responding to severe depression, PTSD, anxiety and hostility.
 - Educational materials should be developed that identify coping skills for problem behaviors commonly associated with depression and PTSD, e.g., alcohol abuse and family violence.
 - Activities for facilitating the development of social support and interpersonal skills should be included in program design.
14. These results were utilized to design materials and activities for the “Growing Together” community education program implemented in Cordova, Alaska in 1996.

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Chronic Psychological Impacts of the *Exxon Valdez* Oil Spill: Resource Loss and Commercial Fishers

Introduction

This research was conducted as part of a larger Mental Health Demonstration Project sponsored by the Prince William Sound Regional Citizens' Advisory Council. The objective of this research was to identify specific psychological symptoms experienced by commercial fishers who were impacted by 1989 *Exxon Valdez* oil spill (*EVOS*). This information was required for the larger project in order to facilitate a design for an appropriate intervention program to reduce the chronic psychological impacts of oil spills. The analysis of stress-response data for commercial fishers six and one-half years after the *Exxon Valdez* spill provided information for the development and design of programs, as well as materials for intervention. This larger project also included the development of an intervention program for reducing the negative social impacts of oil spills and other technological disasters (Picou, et al., 1997).

This report describes the long-term psychological symptoms observed for commercial fishers and also reviews the relationship of resource loss to levels of psychological distress. This information was used to identify potential areas for intervention program activities. The remainder of this report will be structured in the following manner. First, a brief introduction to research on the community impacts of technological disasters is presented. This section is followed by a review of studies conducted on the mental health impacts of the *EVOS*. Third, the research methodology and results of the data analysis are summarized. This report concludes with a review and discussion of the findings.

Community Impacts of Technological Disasters

Technological disasters are catastrophic events caused by humans which result in the toxic contamination of the environment (Kroll-Smith and Couch, 1991; Erikson, 1994; Picou, et al., 1997). In contrast to natural disasters (earthquakes, hurricanes, and tornadoes), technological disasters (radiation

releases, oil spills and industrial contamination) have persistent, long-term social and psychological impacts (Baum and Fleming, 1993; Kroll-Smith and Couch, 1993). For example, research has confirmed that residents near the Three-Mile Island reactor have suffered increased somatic distress, anxiety and depression six years following the radiation release in 1979 (Baum and Fleming, 1993). Furthermore, stress-related biochemical changes, such as blood pressure elevation and impaired immune system functioning, were also identified for residents long after this nuclear accident (Baum and Fleming, 1993).

Research on a variety of other technological disasters also supports the results found for residents of Three-Mile Island. Studies of mine fires, toxic train derailments and industrial contamination all reveal that communities, neighborhoods and families suffer long-term problems in the aftermath of technological disasters (Edelstein, 1988; Brown and Mikkelsen, 1990; Kroll-Smith and Couch, 1991; Picou and Rosebrook, 1993; Bowler, et al., 1996). This body of research literature suggests that there is a need for the development of mitigation programs for reducing chronic social and psychological impacts resulting from technological disasters.

Mental Health Impacts of the *Exxon Valdez* Oil Spill

The *Exxon Valdez* oil spill was one of the most environmentally damaging technological disasters to ever occur in North America (Spies, et al., 1996). Research on the social and psychological consequences of the spill provides convergent evidence that communities in Prince William Sound, Alaska were seriously impacted (Rodin, et al., 1992; Russell, et al., 1996; Gill and Picou, 1997).

Studies document that social disruption of Alaska Native villages occurred in the form of reduced subsistence harvests (Restoration and Planning Work Group, 1990). In the villages hardest hit by the direct impacts of the oil, low subsistence harvests persisted through 1991 (Fall and Field, 1996). Alaska Natives were also found more likely to be characterized by high rates of depression approximately one year following the spill (Palinkas, et al., 1993). Patterns of family, work and subsistence disruption were also reported for Alaska Natives residing in small coastal communities (Dyer, et al., 1992; Dyer, 1993).

Several studies have compared patterns of social disruption experienced by residents in communities impacted by the spill to demographically similar communities that were unaffected by the spill. Palinkas

and associates studied residents of 11 communities impacted by the spill to residents of two control communities (Palinkas, et al., 1992). Impacted communities were characterized by a general decline in social relationships and high levels of depression. A study of the psychological impacts of the spill found that residents living in affected communities were more likely to have generalized anxiety disorder, post-traumatic stress disorder (PTSD) and severe depression (Palinkas, et al., 1993). Specifically, this research found a one year prevalence rate of 20 percent for generalized anxiety disorder, 9 percent for PTSD and 16.6 percent for clinical depression (Palinkas, et al., 1993; Russell, et al., 1996). These data provide evidence that significant social and psychological impacts existed in Prince William Sound communities and Native villages one year following the *Exxon Valdez* disaster.

Economic impacts of the *EVOS* have persisted well-beyond the lost revenues incurred by commercial fishers in 1989. Economic estimates indicate that commercial fishing losses during the first two years reached 154 million dollars (Cohen, 1995; 1997). Furthermore, over the last four years, both herring and pink salmon fisheries in Prince William Sound have experienced serious declines, suggesting continuing economic impacts and resource depletion in the area of the oil spill (Ott, 1992; Kizza, 1993; Phillips, 1993; Fried, 1994).

Longitudinal studies of social disruption and psychological stress have also documented continuing impacts for a resource dependent community in Prince William Sound --Cordova. Compared to a control community (Petersburg), patterns of work, family and personal disruption were found to exist in Cordova 18 months after the *EVOS* (Picou, et al., 1992). Furthermore, although levels of spill-related stress declined in 1990, stress-levels still remained significantly higher in Cordova than in Petersburg (Picou, et al., 1992). Most recently, Picou and Gill (1996) have documented chronic patterns of spill-related stress in communities in the impact area. In particular, they found that commercial fishers had elevated stress levels which persisted for three and one-half years (Picou and Gill, 1996). The data on commercial fishers in Prince William Sound suggest, that as an occupational group, they are more likely than others to be characterized by negative long-term impacts from the *EVOS* (Picou, et al., 1992; Picou, et al., 1997).

In summary, research on the community impacts of the *EVOS* reveals that patterns of social disruption and psychological stress persisted through 1992. Since 1992, continuing declines of pacific herring and pink salmon and low fish prices have plagued commercial fishers in Prince William Sound.

Furthermore, the complex civil litigation triggered by the oil spill has continued, and a jury decision in 1994, final restitution appears to be over five years away (Hirsch, 1997). This continuing disaster situation suggests that chronic social and psychological impacts still characterize commercial fishers in Prince William Sound.

Resource Loss and Chronic Stress

Empirical studies of the social consequences of the *EVOS* have found commercial fishers and Alaska Natives to be two groups at high-risk for negative impacts (Picou and Gill, 1996; Gill and Picou, 1997). The Prince William Sound salmon and herring fisheries are important economic resources to commercial fishers, as well as important cultural resources to Alaska Natives. In resource-dependent communities, the ecological damage of the *EVOS* served as a direct, long-term threat to groups involved in fisheries harvests (Picou and Gill, 1996).

Nonetheless, the negative social and psychological impacts of the oil spill were not observed for all commercial fishers in the impact area (Picou and Gill, 1996). Given these observations, one must ask the question, “How can the differential impacts within this high-risk group (commercial fishers) be explained?” This research will address this basic question by providing empirical information for understanding how this pattern of chronic stress has persisted over the years. This information will help to identify types of intervention strategies appropriate for mitigating these long-term impacts.

The conservation of resources (COR) model of stress-response provides an appropriate theoretical framework for conceptualizing resource loss and chronic stress among commercial fishers impacted by the *Exxon Valdez* disaster. The basic assumptions of the COR model is that people are motivated “to obtain, retain and protect that which they value” (Hobfoll, 1988; 1989; 1991: 187). Phenomena that people value, or that enable them to obtain or protect that which they value, are viewed as resources (Hobfoll, 1988; 1989).

Resources are the single unit necessary for understanding stress and can be classified as follows: (1) **objects** (e.g., car, house, permits); (2) **personal characteristics** (e.g., social status, self-esteem, sense of mastery); (3) **conditions** (e.g., family relations, marriage, interpersonal relations); or (4) **energies** (e.g.,

credit, money, owed favors) that are valued by individuals; or (5) **the means for attainment** of those **objects, personal characteristics, conditions, or energies** (Hobfoll, 1988; 1989). The role of these resources is important for the COR stress model, leading to the premise that individuals (alone and in systems) strive to maximize resource gain and minimize resource loss (Hobfoll, 1991).

Using this perspective, psychological stress can be defined as a reaction to the environment, in which there is either: (a) the threat of net loss of resources, or (b) the actual net loss of resources, or © the lack of resource gain following investment of resources. Both **actual** and **perceived loss** and **lack of gain** are viewed as sufficient for producing stress (Hobfoll, 1988; 1989:25-28).

Commercial fishers in Prince William Sound harvest "objective" resources by their position in the social structure of resource-dependent communities (e.g., occupational roles). Put simply, the fishers and those in various support occupations for commercial fishing put "food on their table" and "clothes on their back" through their skills and ability to harvest renewable natural resources, i.e., herring, salmon, etc. However, there is more than just the objective resource loss of fish for understanding patterns of chronic stress. According to the COR model (Hobfoll, 1988; 1989) the "threat" and "actual loss" of fishery resources posed by the *EVOS* is also a source for psychological distress, which, in turn, generates the potential for long-term loss of social and personal resources.

Renewable resources for commercial fishers entail more than just material values. Rather, as has been previously noted, resources carry with them both instrumental and symbolic value. Hence, resource assessments by residents are derived from the basic values they have acquired through their personal experience (Hobfoll, 1989). Resources are also important for establishing self-esteem, social standing, and for transmitting cultural values. Fishers make self-evaluations based on their ability to control their environment, harvest renewable resources and receive financial gain (e.g., self-esteem, social status, social support). Families express their cultural subsistence and work values through continuous harvest and exchange of renewable resources. When the initial "objective" resource loss occurred in 1989 (loss of revenue from fishing season through oiling), as predicted by the COR model, many commercial fishers began a "resource loss spiral" in which a wide range of resources were continuously depleted over the years (Hobfoll, 1989; 1991).

This resource loss spiral can be very debilitating because of the inability to use depleted resources for effective coping and adaptation. Furthermore, other specific resources, which were not directly depleted by the spill, may be invested in secondary activities to recover damages (e.g., litigation, failed fishery, sell possessions). Such resource use does not necessarily reduce stress-levels, but may actually contribute to the persistence of chronic stress, if continued investments are made over the years without significant returns (Hobfoll, 1991).

The analysis in this report will describe the psychological characteristics of commercial fishers six and one-half years following the *EVOS*. Next, an evaluation of the COR model as an appropriate framework for understanding chronic distress among commercial fishers will be conducted. High levels of psychological distress will be analyzed in terms of economic resource loss, conditions resource loss, and personal resource loss. The analysis is guided by the general hypothesis that **the nature and type of resource loss is associated with severe levels of psychological distress.**

Methodology

Previous research has documented that long-term social disruption and psychological stress characterized commercial fishers in Prince William Sound (Picou, et al., 1992; Picou, et al., 1997). A survey of commercial fishers was conducted in 1995 to determine potential social and economic aspects of stress and to diagnose chronic psychological symptoms. Collection of this data was necessary to develop community mental health programs for mitigating specific types of social and psychological stress.

Sample. The sample population was a list of commercial fishers and others related to the commercial fishing industry, including businesses. This list was obtained in 1989 as part of an initial study of the human impacts of the *EVOS*. The list was adjusted by omitting businesses and individuals known to be deceased resulting in a total of 541 individuals. The majority (88%) of these individuals had Cordova addresses in 1989 and many were members of the Cordova District Fishermen United (CDFU) organization. CDFU represents commercial fishing interests in political and management issues and draws its membership primarily from AREA E permit holders, the majority of which reside in Cordova. It was

determined that 156 individuals on the 1989 list were current members of CDFU in 1997. Membership in CDFU has declined since 1989 and it is probable that others on the list were CDFU members in 1989.

Survey Design. The survey instrument consisted of three main sections: (1) demographic information, (2) indicators of resource loss, and (3) indicators of psychological stress. Demographic variables such as age, gender, education, and income category have been documented to influence levels of stress. Indicators of resource loss were based on research findings on the loss or threat of loss of resources (Hobfoll, 1988; 1989; 1991). This section was developed in response to oil spill and cleanup impacts on AREA E Fishery resources, as well as other economic losses experienced by the respondents. Indicators of psychological stress included standardized measures of stress used in previous research on the community of Cordova, as well as the Symptoms Checklist 90-Revised (SCL90-R) (Derogatis, 1992). These measures are described in more detail in the analysis section of this report.

Data Collection. Surveys were mailed in July of 1995. The first mailing was followed three weeks later with postcard reminders to those who had not responded by that time. Since the list was dated, there were several undeliverable surveys resulting from incorrect addresses. Attempts were made to obtain current addresses for these individuals by coordinating with CDFU and the Fishermen Claims Office in Cordova. In September and October, surveys were mailed to those with corrected addresses and a second survey was mailed to the others who had not responded.

Response Rate. A total of 125 individuals completed the survey. Of the 541 surveys sent, it was determined that 84 were undeliverable because of incorrect addresses and an additional 11 individuals were deceased, resulting 446 delivered surveys. Based upon delivered surveys, the response rate was 28%. Among current CDFU members (n=156), four surveys were undeliverable and 56 surveys were returned, yielding a response rate of 37%. Other characteristics of the sample and response rates were revealed by comparing the list with information obtained from Alaska's Commercial Fishing Entry Commission (CFEC) data. Since its inception, the CFEC maintained the names and addresses of all commercial fishery permit holders for each year. Among the 446 individuals who received a survey, 382 were permit holders in 1989 with 29% of these individuals responding to the survey and 342 were permit holders in 1995 with 32% responding. CFEC data also include the addresses of permit holders. It was known that Cordova had experienced some out-migration since 1989, so the list of 446 was analyzed by city of last known residence

in 1995. Among the 446 individuals who received a survey, 196 had Cordova as their last known address with 30% of these individuals responding to the survey.

Demographic Characteristics of Respondents. Demographic characteristics of the respondents include gender, ethnicity, marital status, years of education, number of people in the household, years residing in the community, fishing occupation and annual household income. These characteristics are summarized in Table 1. As is characteristic of the commercial fishing industry, most of the respondents were male with females comprising only 13.6%. In terms of ethnicity, over 90% of the respondents were white and 5.6% were Alaska Natives. Seven out of ten respondents were married and the average household size was just under 3 people (2.8). The respondents had relatively high levels of education with 68.8% having more than a high school education and 13.6% having post-graduate degrees or studies. The average 1994 household income of the respondents was \$52,000 with a median of \$44,000 and the average length of residence in the community was 33 years with a median of 25 years. In terms of commercial fishing occupations, the majority (88%) of the respondents owned their own fishing vessels.

Statistical Analysis. The data utilized in this report were analyzed by descriptive statistical techniques. Percentage distributions are presented to identify proportions of respondents who suffer severe levels of psychological stress. Psychological stress was measured by a standardized psychological test which identifies symptoms and severe symptom levels. These levels were determined by comparisons to scores for normal populations.

The chi-square statistical test was used to evaluate the relationship of resource loss to severe psychological distress. This statistical test compares actual responses to expected responses and estimates the probability that the observed frequencies could have occurred by chance (Siegel, 1956).

Table 1: Demographic characteristics of respondents: 1995 Cordova fishers survey (n=125)

Demographic Characteristic	Frequency	Percent
Gender		
Female	17	13.6
Male	108	86.4
Marital Status		
Married	88	70.4
Not Married	36	28.8
No Response	1	0.8
Ethnicity		
White	114	91.2
Alaska Native	7	5.6
Other	4	3.2
Occupation		
Owner	110	88.0
Skipper	6	4.8
Deckhand	1	0.8
Other	4	3.2
None	2	1.6
No Response	2	1.6
Educational Achievement		
Some High School	3	2.4
High School	36	28.8
Some College	53	42.4
College Degree	16	12.8
Some Graduate Study	8	6.4
Masters Degree	5	4.0
Professional Degree	4	3.2
Other Selected Characteristics	Mean	Median
Years in Community	32.8	25.0
Household Size	2.8	2.0
Number of Dependent Children in Household	1.0	0.0
1994 Income	52,000	44,000

Measurement of Psychological Stress: Assessment of psychological symptoms was made using standardized psychological tests. The Impact of Event Scale (IES) is a 15- item self-report inventory designed to measure the extent to which a given stressful life event produces negative subjective responses (Horowitz, et al., 1979). Items are designed to yield subscores for intrusive and avoidance symptoms. Respondents were requested to indicate on a 4-point scale the frequency with which each of the 15 statements was true for them during the past seven days regarding the *EVOS*. Scores are obtained for the avoidance, intrusion, and total distress scales by summing the responses for each item on the scale. The IES has good split-half reliability ($r = .86$) and high test-retest reliability ($r = .87$) (Horowitz, et al., 1979).

The Symptom Checklist 90-Revised (SCL90-R) is a 90-item self-report inventory designed to assess current psychological symptoms (Derogatis, 1992). Participants indicate on a scale from 0 to 4 the degree to which they have experienced each symptom over the past two weeks. The Global Severity Index (GSI) of the SCL90-R provides a global measure of adjustment. In addition, the SCL90-R has eight subscales (Depression, Obsessive-Compulsive, Interpersonal Sensitivity, Psychoticism, Somatization, Anxiety, Paranoid Ideation, Hostility, and Phobic Anxiety) which assess levels of specific symptom patterns. Data are presented for the depression, anxiety, and hostility subscales because these symptoms were found to be the most severe.

The SCL90-R has normative tables for a number of different populations (Derogatis, 1992). Non-patient norms were used to establish a cut off score for asymptomatic versus symptomatic subjects on the GSI and each of the subscales. These tables were used to identify respondents who reported significant levels of anxiety, hostility, and depression. Participants with a t score of 70 or greater on these subscales were categorized as symptomatic, or as having severe symptoms. Respondents scoring below a t score of 70 were categorized as having nonsignificant symptoms. A t score of 70 means that less than 2% of a normal population obtained a score equal to or higher than the designated value. This is a commonly used index that identifies the clinical significance of the observed psychological symptom.

Items from the IES and the SCL90-R were selected which corresponded to each of the symptoms listed under the criteria for PTSD in the Diagnostic and Statistical Manual of Mental Disorders -- fourth edition (DSM-IV) (American Psychiatric Association, 1994). An additional six items were added to the IES to cover symptoms not included on the IES or SCL90-R. These items were then used to determine if an

individual met each of the criteria for a diagnosis of PTSD as listed in the DSM-IV. PTSD is a mental disorder which frequently follows a traumatic event, such as exposure to a disaster. It is characterized by the delayed onset of intrusive symptoms, such as frequent memories of the trauma, nightmares, or flashbacks. Avoidance symptoms, such as efforts to not think about the trauma, avoidance of situations which remind one of the trauma and, increased arousal which is characterized by difficulties with attention and concentration, increased irritability, and hypervigilance are also characteristics of PTSD. This psychological disorder was determined by responses to questions which identified all of these symptoms.

Results

The first phase of the analysis will review the severity of levels of anxiety, hostility, depression and spill-related post-traumatic stress disorder. Based on responses to the Symptom Checklist 90-Revised, Figure 1 reveals that 20 percent of the respondents were classified as having significant levels of current anxiety. Furthermore, 14 percent of the respondents reported significant levels of hostility (Figure 2), while 40 percent were found to have severe levels of current depression (Figure 3).

The criteria for PTSD involved multiple measures of intrusive recollections and avoidance behaviors associated directly with the *EVOS*. These measures were combined with the PTSD subscale available on the SCL90-R to meet symptom criteria for PTSD listed in the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 1994). Using this scale, 37 percent of the respondents were found to have symptoms indicating PTSD (Figure 4).

Given that depression and spill-related PTSD were symptoms reported by the largest proportions of commercial fishers, the relationship between these two measures of chronic psychological distress was evaluated. Twenty-four percent of the respondents were found to be characterized by significant symptoms of both depression and PTSD. Approximately 15 percent manifested only PTSD symptoms, while almost 13 percent were just severely depressed. Taken together, depression and PTSD characterized over 52 percent of the commercial fishers who responded to the survey (Figure 5).

Figure 1. SCL90-R Anxiety subscale scores.

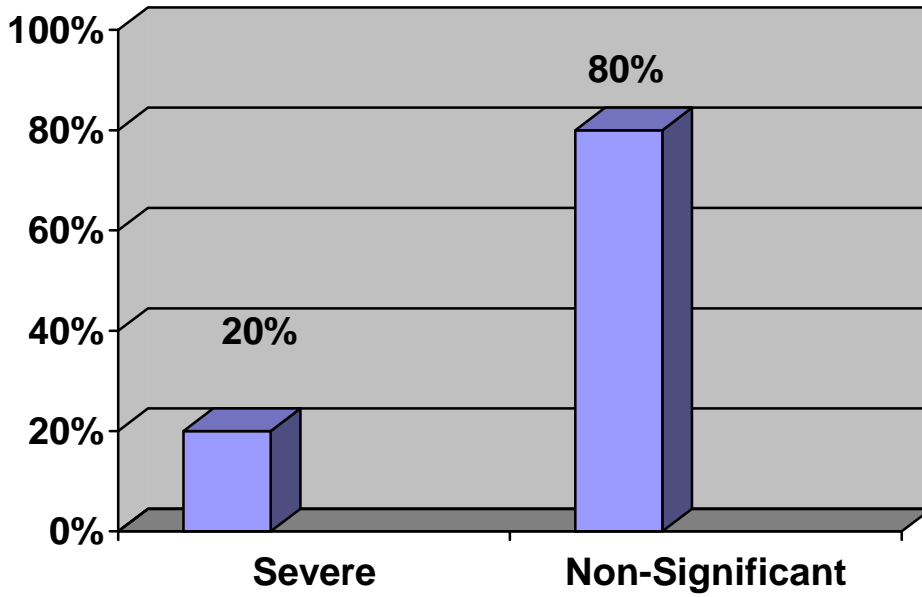


Figure 2. SCL90-R Hostility subscale scores.

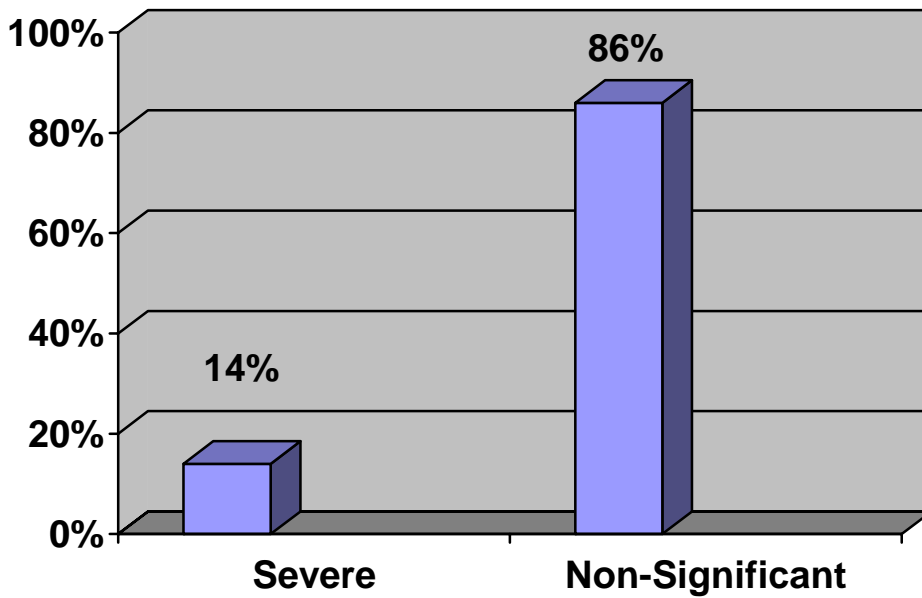


Figure 3. SCL-90-R Depression subscale scores.

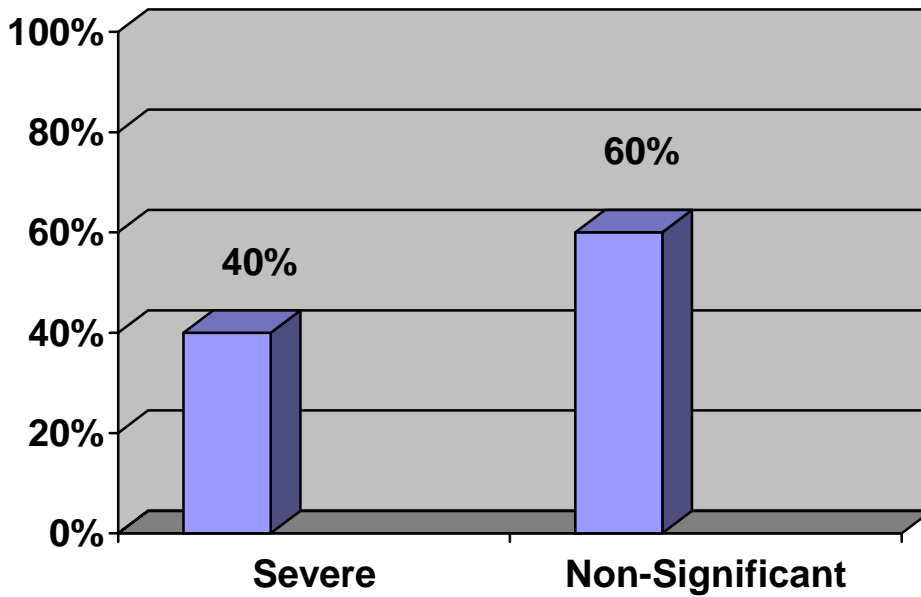
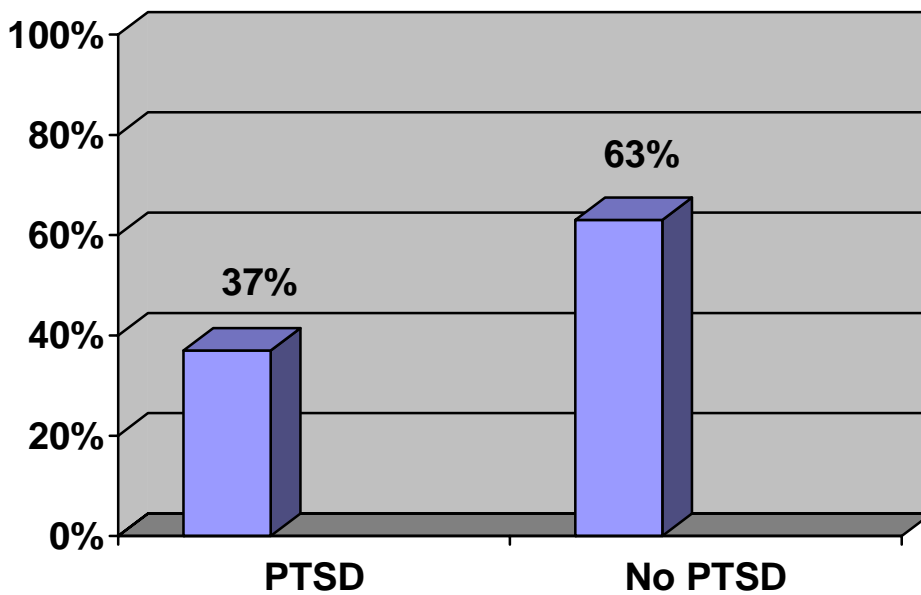


Figure 4. Post-traumatic stress disorder diagnostic groups.



Depression and PTSD are often associated with inadequate social support groups and social isolation. That is, people with severe symptoms of both disorders have corresponding problems with social relationships. This pattern was observed for commercial fishers. Since the *Exxon Valdez* spill, 36 percent

of the respondents felt that "relationships with relatives" had suffered or ended. Only five percent reported that their "relationships with relatives" had improved, while 57 percent noted no changes since the spill (see Figure 6). Relationships with non-relatives were also found to have deteriorated since the spill.

Approximately 42 percent of the respondents reported that "relationships with non-relatives" had suffered or ended since the spill, suggesting an overall deterioration of social relationships for commercial fishers over the last six and one half years (Figure 7).

Respondents were also aware of increased emotional and physical problems since the spill. Sixty-seven percent of the respondents felt that they had more emotional problems since the spill and almost half (48%) reported they had more physical health problems (Figures 8 and 9). Ironically, the data in Figure 10 reveal that only 10 percent of the commercial fishers reported they sought professional treatment for their increased emotional problems.

Economic losses to commercial fishers were determined by a survey question which asked respondents to estimate their yearly economic gain or loss since 1989. Economic losses from the spill did not appear until 1990. In 1989, the respondents reported an average income gain of \$39,382. However, for the years 1990-94, the commercial fishers reported a total average loss of \$214,689. Since 1992, the economic losses to commercial fishers have averaged just under \$40,000 per year.

Total economic loss was not found to be significantly associated with high-levels of depression or PTSD. However, the COR stress model identifies two important types of stress-producing economic resource loss-- "economic loss spirals" and "resource investment without gain." An economic loss spiral was operationalized in terms of having lost money a majority of years since the *EVOS* spill. "Resource investment without gain" was operationalized in terms of respondents and spouses taking a second job, but still reporting a yearly income loss despite this investment in extra work. High levels of depression and PTSD were operationalized as the upper 33 percent of scores observed for these two indicators of psychological stress.

Figure 5. Depression X PTSD

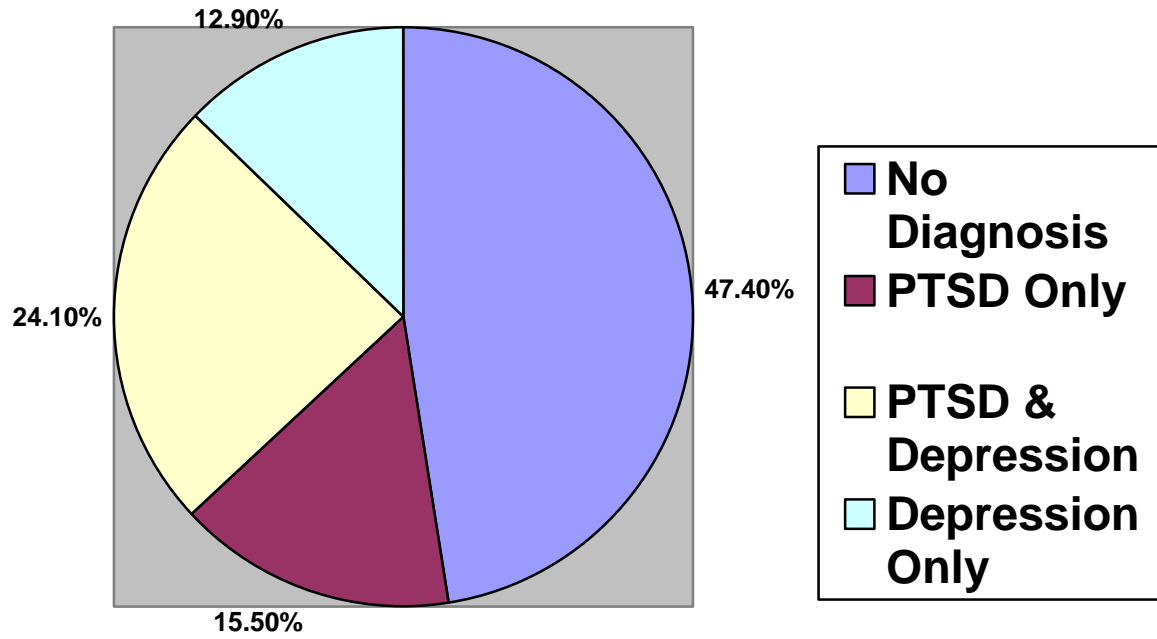


Figure 6. Relationship with relatives.

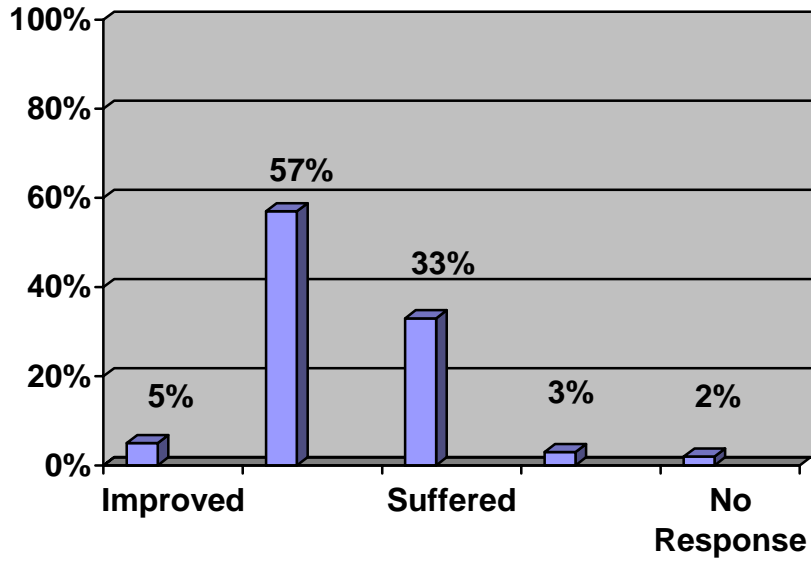


Figure 7. Relationships with non-relatives.

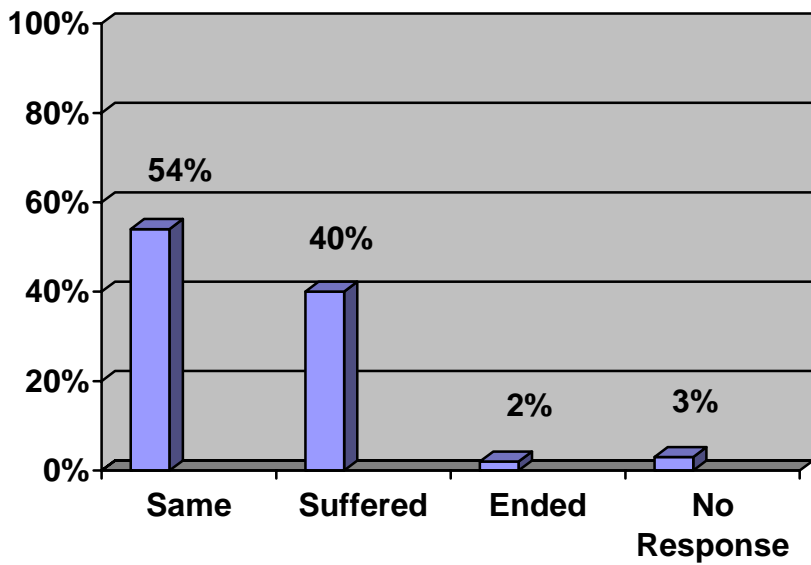


Figure 8. Changes in emotional health since oil spill.

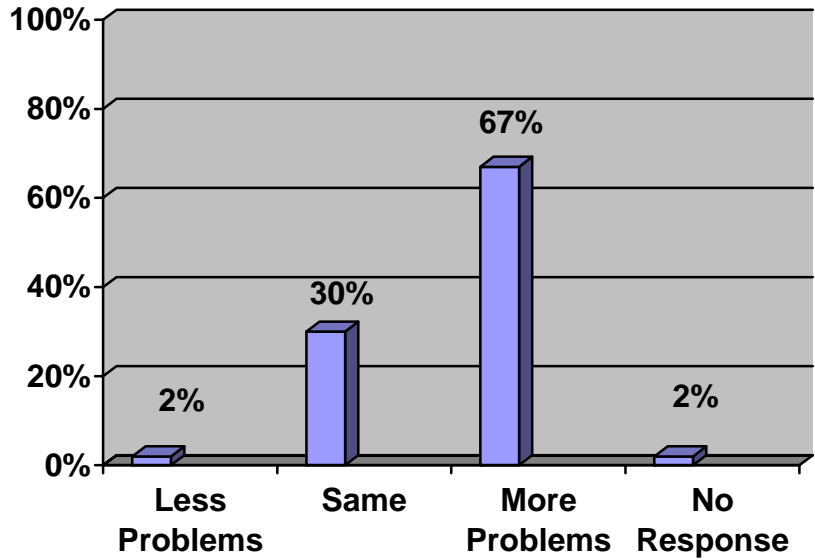


Figure 9. Changes in physical health since oil spill.

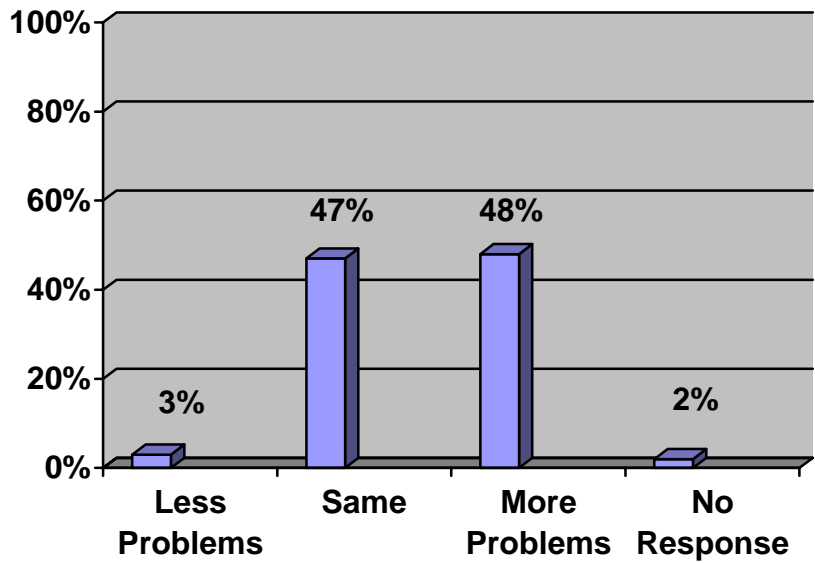


Figure 10. Sought help for emotional problems since oil spill.

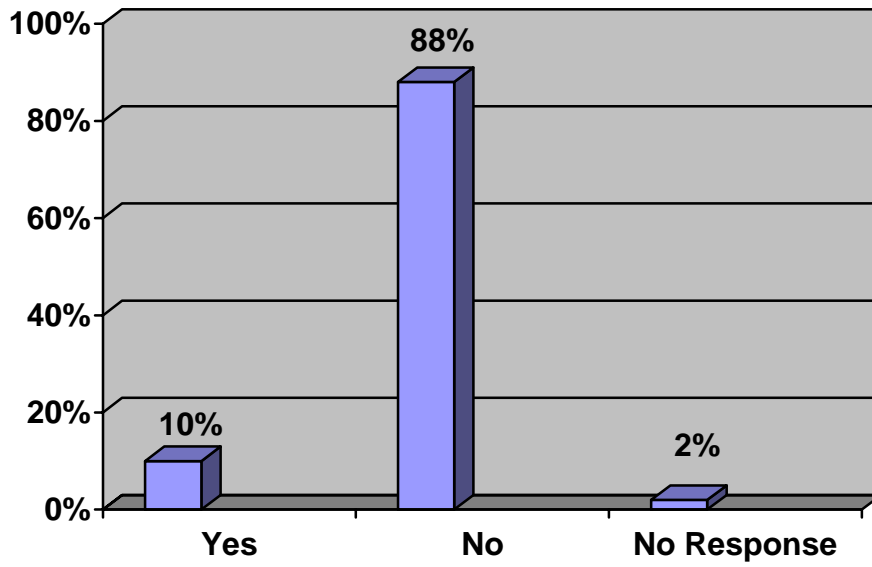


Figure 11 reveals that commercial fishers who had high-levels of depression and PTSD were found more likely to have experienced an "economic loss spiral" over the last six years. Approximately 35 percent of the high depression group and 34.5 percent of the high PTSD group were in economic decline.

A similar pattern was found for commercial fishers who made "investments without gain" (Figure 12). Approximately 39 percent of respondents in the high depression group and 40 percent of the high PTSD group had taken second jobs but still reported continuing economic losses. Substantially smaller percentages of commercial fishers in the low depression/PTSD groups had experienced such economic problems. In summary, high levels of depression and PTSD were found to be significantly associated with economic resource loss experienced by commercial fishers over the last six years. Specifically, those commercial fishers who have experienced an economic loss spiral and those who made economic investments without gain manifested the highest levels of depression and PTSD.

The COR model identifies "objective resources" as possessions, objects and/or materials which are available to an individual. Objective resource loss was measured by a survey question which asked respondents if they had been forced to sell their possessions to compensate for losses since the *Exxon Valdez* spill. Figure 13 reveals that over half of all commercial fishers experiencing high levels of depression (51.4%) and PTSD (55.6%) reported that over the last six years they had sold possessions. This pattern indicates that objective resource loss was significantly associated with symptoms of depression and PTSD.

Figure 11. Economic loss spiral by level of depression and PTSD.

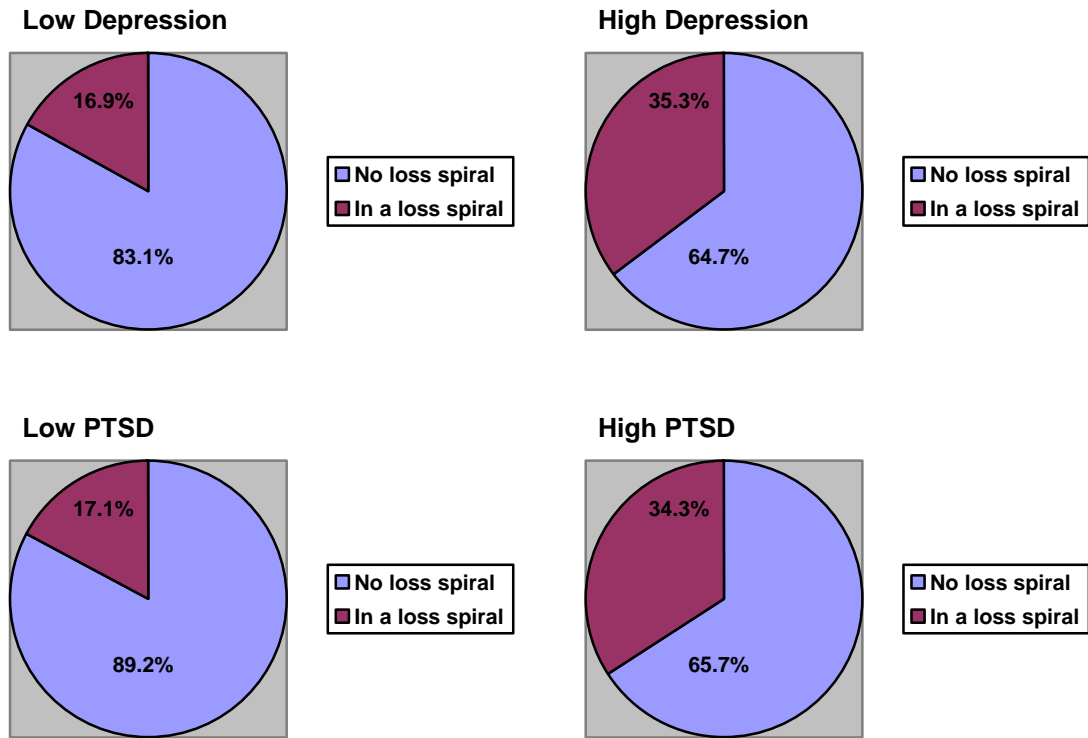
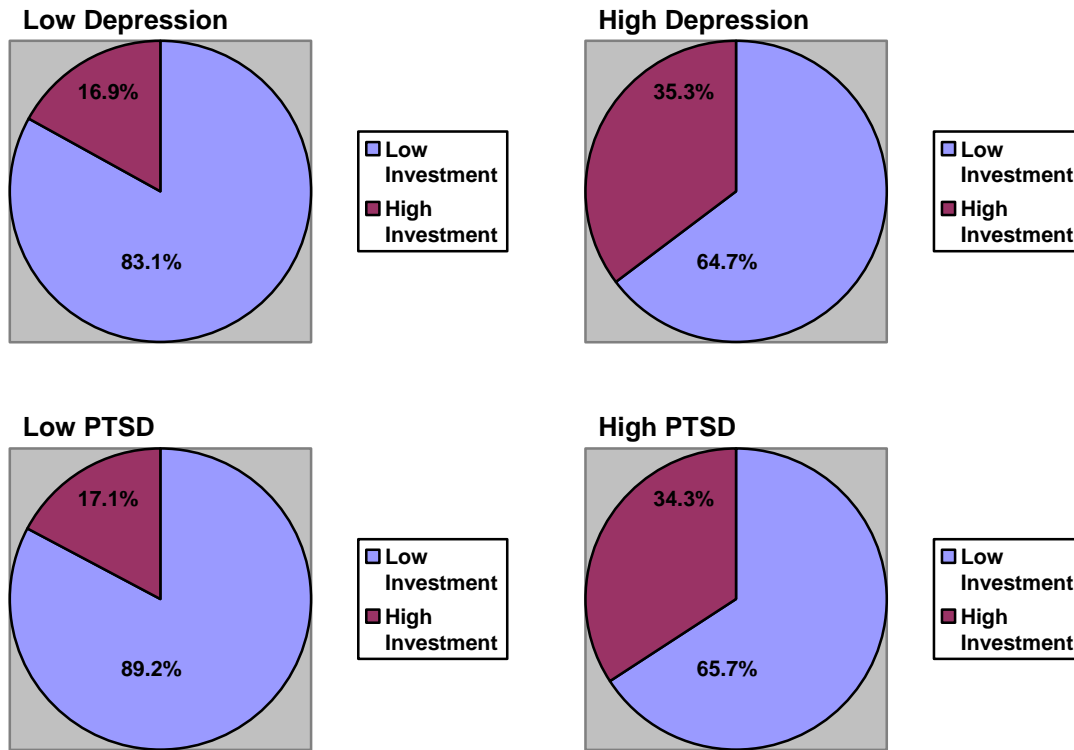


Figure 12. Economic loss spiral by level of depression and PTSD.



The COR model also identifies the social roles and relationships that people experience on a daily basis as the context for "conditions resources." Examples of such conditions would be intimate social support, relationship networks and personal health. Family functioning and interpersonal relationships are important social conditions that facilitate coping with the chronic adversities produced by technological disasters. The loss of these "conditions resources" are predicted by the COR model to be stress-inducing. This hypothesis was supported for commercial fishers. Figure 14 reveals that respondents who reported that family relations were adversely impacted by the spill were more likely to be in the high depression and PTSD groups. Just under 80 percent of all commercial fishers in the high depression (77.8%) and high PTSD (77.8%) groups reported negative family impacts as a result of the spill. The majority of respondents in the low depression and PTSD groups indicated they did not experience family problems as a result of the spill.

A similar pattern was found for respondents who reported that relationship with relatives and non-relatives had suffered. Over 60 percent of the commercial fishers in the high depression and PTSD groups reported that since the spill their relationships with relatives had suffered (Figure 15). Figure 16 shows that slightly less than 70 percent of the respondents in the high depression and PTSD groups reported that relationships with non-relatives had suffered. Once again, the majority of respondents in the low depression/PTSD groups reported stable social relationships with relatives and non-relatives since the spill. These results suggest that the breakdown of important social relationships (family and friends) is associated with chronic depression and PTSD.

A final indicator of "personal resource loss" involves one's perception of their own physical and emotional health. The loss of these two basic components of self, i.e. physical and mental health, should result in increased psychological stress. This prediction was supported by the data analysis presented in Figures 17 and 18. The majority of commercial fishers (63.9%) in the high depression and high PTSD groups reported that they were experiencing more physical health problems since the spill. In contrast, a majority (60.8%) in the low depression/PTSD groups reported that they were not experiencing more physical health problems. With regard to emotional health, the data are even more compelling.

Figure 13. Objective resource loss by level of depression and PTSD.

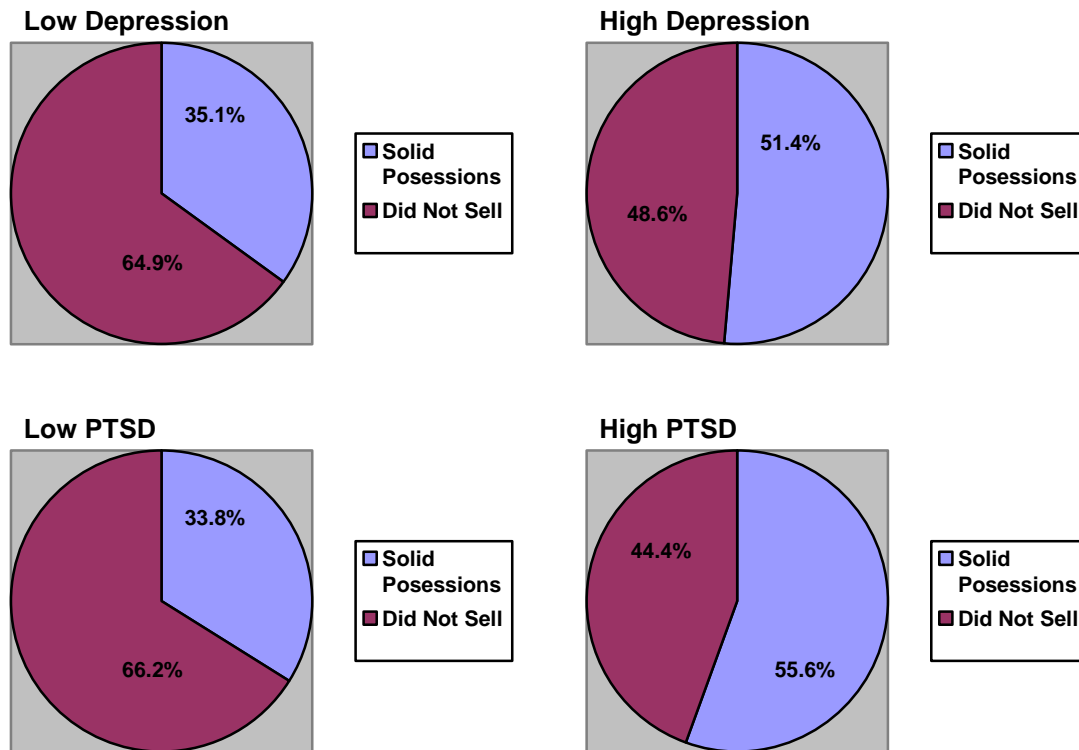


Figure 14. Conditions resource loss by level of depression and PTSD: Family get-togethers.

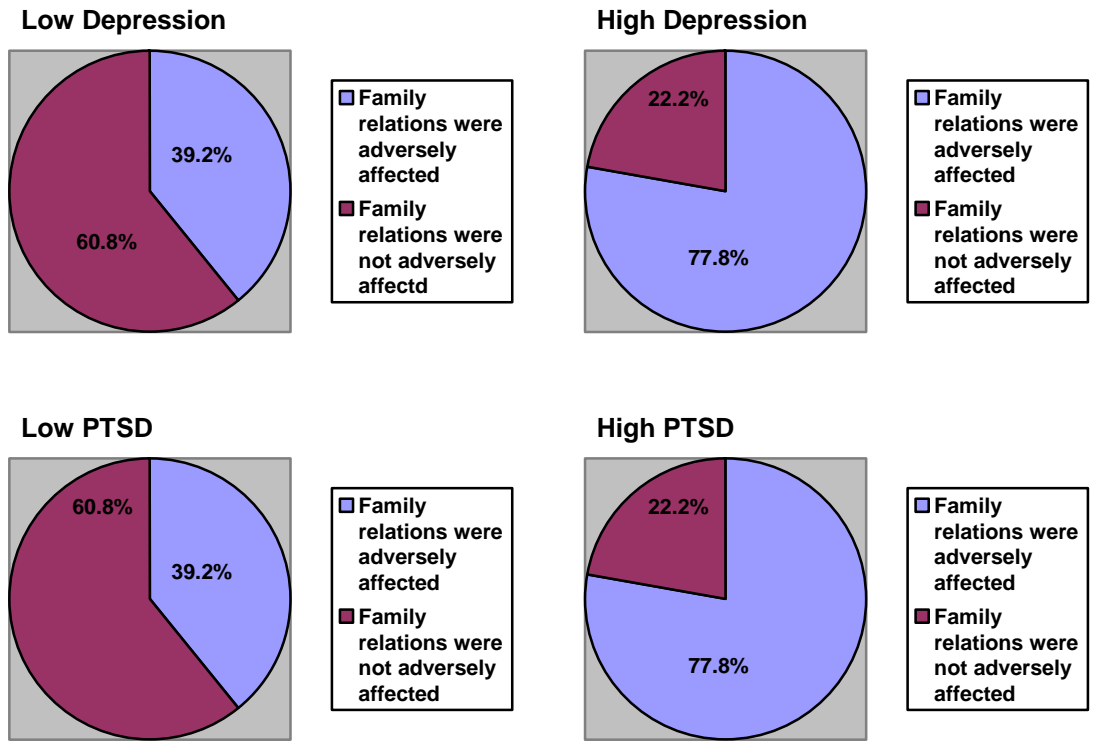


Figure 15. Conditions resource loss by level of depression and PTSD: Relatives

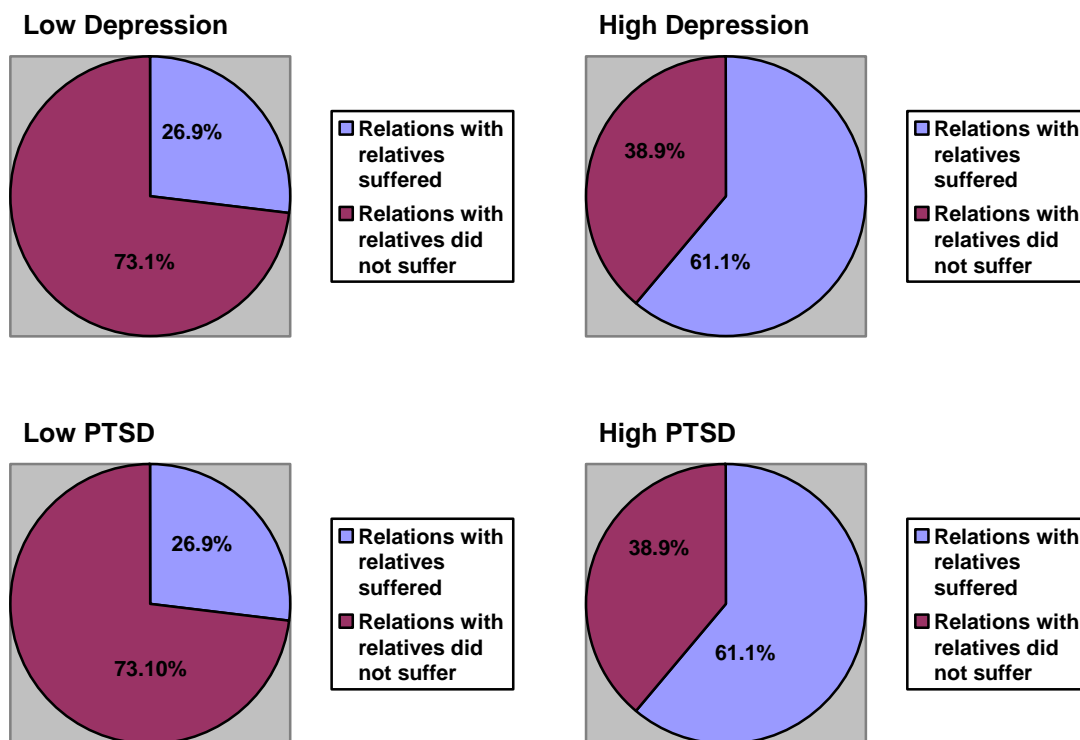


Figure 16. Conditions resource loss by level of depression and PTSD: Non-relatives.

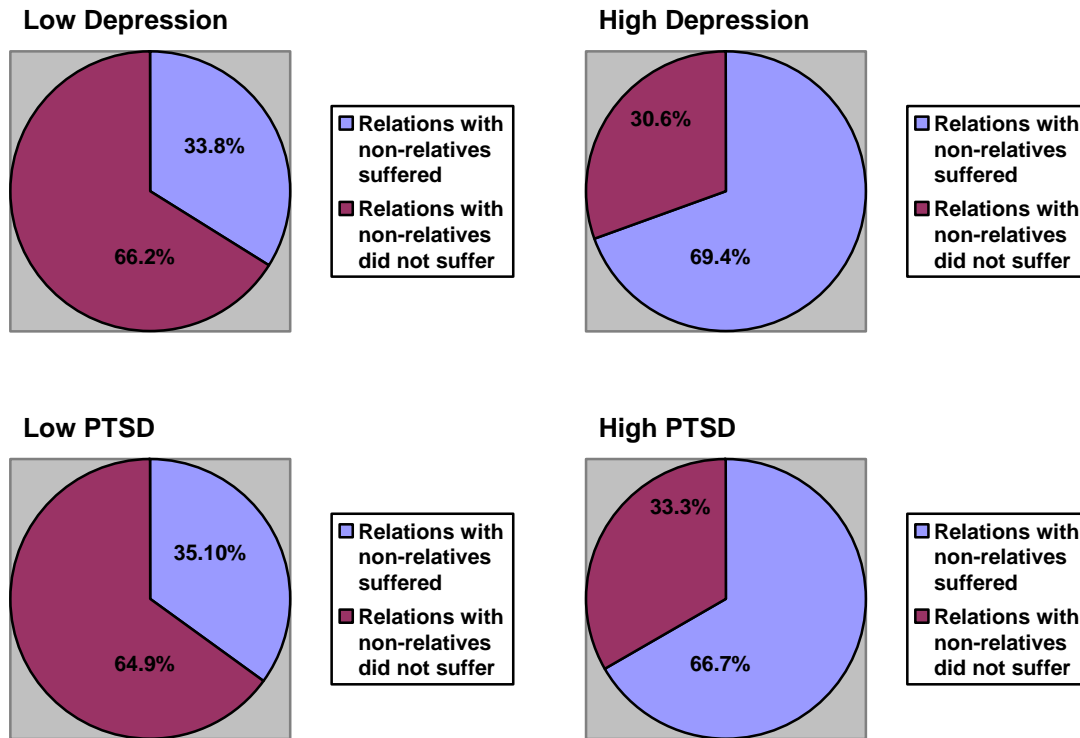
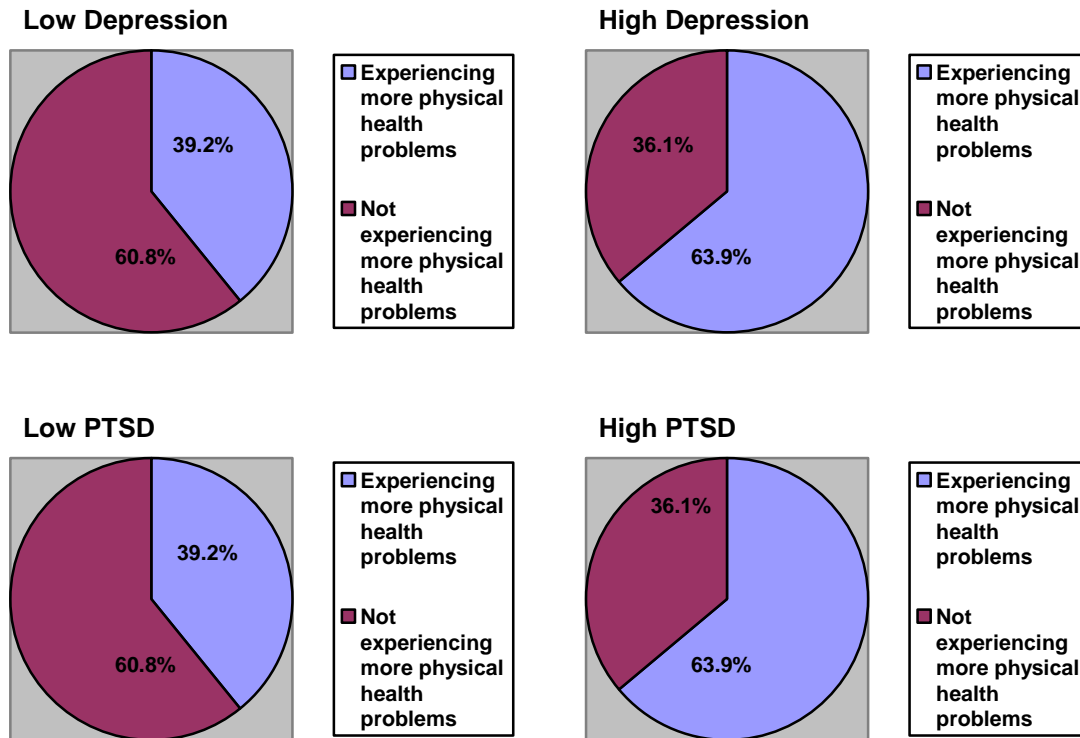


Figure 17. Conditions resource loss by level of depression and PTSD: Physical health.



All commercial fishers in the high depression group and 97% in the high PTSD group reported they had experienced more emotional health problems since the spill (Figure 18). These results reveal that the loss of personal resource characteristics, such as the perceived decline of one’s physical and emotional health, is highly associated with symptoms of depression and PTSD.

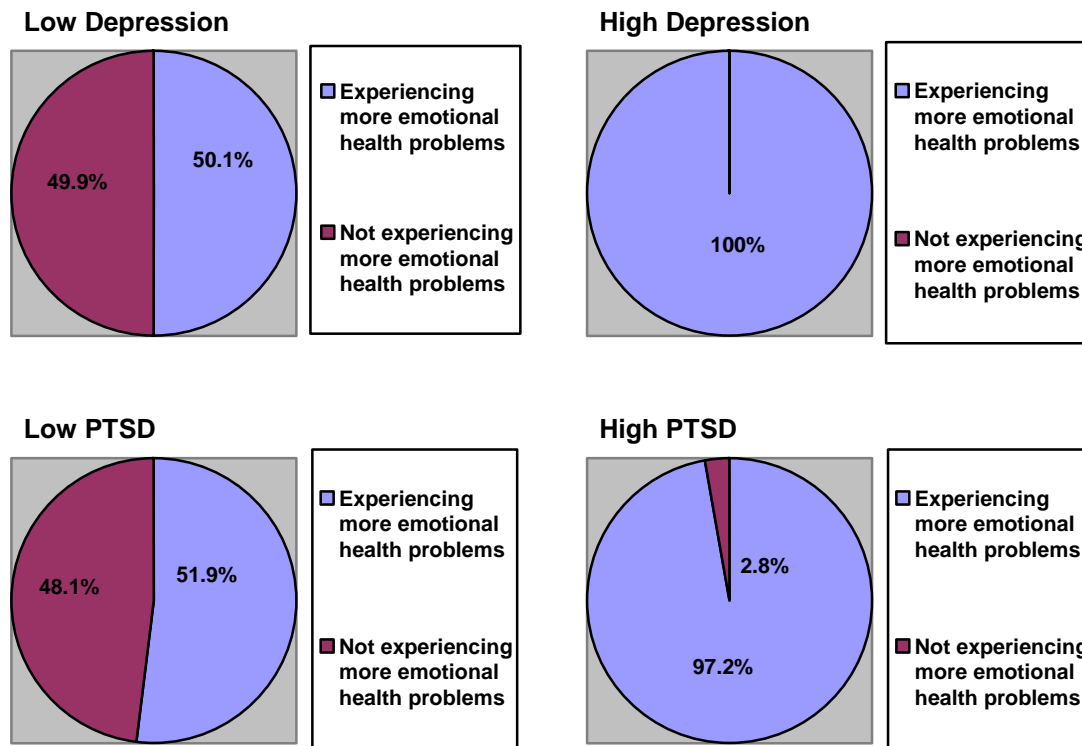
Summary and Conclusions

This research was designed to identify the prevalence and types of chronic psychological stress experienced by commercial fishers as a result of the *EVOS*. This study was conducted to provide detailed information on the chronic stress symptoms of this high-risk group in order to aid the design of a community intervention program for mitigating the long-term community impacts of technological disasters. The results confirm the existence of chronic social and psychological impacts.

Specifically, significant numbers of commercial fishers were found to be characterized by severe anxiety, depression and hostility. Furthermore, a relatively large percentage of the respondents were found to manifest symptoms of PTSD. Despite these observed rates of psychological distress, only a very small percentage of those experiencing emotional problems had sought professional treatment.

The results of this research also confirmed the fact that the continuing psychological stress observed for commercial fishers was associated with various types of resource loss. Economic, social and personal resource loss were found to be significantly related to symptoms of severe depression and PTSD. Long-term economic loss spirals and unsuccessful attempts to recover on-going economic losses were found to characterize commercial fishers experiencing severe depression and PTSD. Adverse impacts of the *EVOS* on important social relationships were also reported by a majority of respondents with high-levels of depression and PTSD. Virtually all of the commercial fishers classified as having severe depression and PTSD reported that their physical and emotional health had declined since the *EVOS*.

Figure 18. Conditions resource loss by level of depression and PTSD: Emotional health.



These findings

replicate numerous studies conducted over the last twenty-five years on a variety of technological disasters (Baum and Fleming, 1993; Kroll-Smith and Couch, 1993; Erikson, 1994). Furthermore, this research expands previous studies of the social impacts of the *EVOS* (Donald, et al., 1990; Picou, et al., 1992; Palinkas, et al., 1993; Picou and Gill, 1996). Our data suggest that the social and psychological impacts of the *EVOS* have persisted for over six years for an identified high-risk group--commercial fishers. Although the generalizability of our results are restricted by the fact that commercial fishers were purposefully targeted to be interviewed, our findings do have implications for the design and development of a community intervention program to mitigate these impacts.

The data analyzed in this report revealed that the vast majority of commercial fishers who were experiencing emotional problems did not seek out mental health services. This finding is consistent with observations from other technological disasters and suggests that an outreach design be used for developing an intervention program. Proactive outreach activities are nontraditional in that mitigation is based more on education than office-based therapy. Programs designed to reduce job insecurity and family stress for

farmers have successfully used outreach strategies to deliver mitigation services (Jurich and Russell, 1987; Zimmerman and Fetsch, 1994). Community education programs have also been found to be preferred over therapy for reducing family stress caused by chronic economic problems (Zimmerman and Fetsch, 1994). Given these observations and our results, it appeared that a community education program designed in terms of various outreach activities would be an appropriate intervention strategy for mitigating the chronic social and psychological impacts of the *EVOS* (Larson, et al., 1994).

The specific types of psychological symptoms identified in this report should be addressed in tailored educational materials distributed through outreach strategies. Minimally, materials which identify effective coping skills for responding to severe depression, PTSD, anxiety and hostility should be identified, developed and delivered to both high-risk groups and the community at large. Furthermore, problem behaviors commonly associated with psychological symptoms identified by this study should also be addressed. Information on alcohol abuse, family violence and social isolation should be included as program materials.

The observations that family and social relationships had suffered over the last six years revealed the importance of encouraging the restoration of social relations through intervention activities. Social support is an important condition for effectively coping with chronic psychological stress. Commercial fishers who maintained healthy social relations were minimally characterized by severe depression and PTSD. The importance of developing an intervention strategy involving social support activities was identified from these results. Effective coping strategies would be enhanced through informal support relations established by trained, volunteer peer listeners who are members of the local community.

In conclusion, this research provided empirical data on the social and psychological impacts of the *EVOS*. This information, along with previous research on other technological disasters, identified a community education outreach program as being the most appropriate intervention strategy for mitigating these chronic impacts. The content of program materials were also verified by our data analysis and subsequently this information was used for the development of the "Growing Together" community education program (Picou, et al., 1997). This program consisted of six outreach activities and provided educational information on technological disasters, their community impacts and appropriate recovery and

coping responses. The program was implemented and field-tested in Cordova, Alaska in 1996 (Picou, et al., 1997).

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Glossary

avoidance: efforts to avoid memories and thoughts of a traumatic event, such as trying not to think about it, avoiding reminders of the event, and feelings of emotional numbness.

chi-square statistical test: a test of statistical significance based on a comparison of the observed cell frequencies of a joint contingency table with frequencies that would be expected under the null hypothesis of no relationship.

chronic stress: stress responses which persist over a long period of time; of disease, deep-seated and lasting.

conservation of resources (COR): a model of stress-responses based on the premise that people have a basic motivation to obtain, retain, and protect that which they value, stress is expressed when loss exceeds the ability of people to replenish lost resources.

depression: a neurotic or psychotic condition marked by an inability to concentrate, insomnia, and feelings of dejection and guilt.

economic impact: changes in an individual's or community's ability to sustain or increase the development, production and management of material wealth relating to the necessities of individual, family, or community life.

generalized anxiety disorder: an intense fear or dread lacking a clearly defined cause or specific threat indicated by restlessness or feeling keyed up or on edge, being easily fatigued, difficulty concentrating or mind going blank, irritability, muscle tension, sleep disturbance (difficulty falling or staying asleep, or restless unsatisfying sleep).

hypervigilance: an increased watchfulness or heightened perception of possible risk.

impact area: the geographic location directly affected by a catastrophic event.

impact of events (IES) scale: a 15 item instrument which identify characteristics of intrusive stress and avoidance behavior within populations affected by specific events.

mean: a measure of central tendency for continuous variables calculated as the sum of all scores in a distribution, divided by the number of scores; the arithmetic average.

median: the value that exactly divides and ordered frequency distribution into equal halves; the calculation associated with the 50th percentile.

mitigation: the process of defining event related symptoms and placing into action education and intervention programs to reduce the severity or intensity of the symptoms.

natural disaster: an event of nature, meteorological or geophysical, which subjected human populations to high levels of stress; disaster which has its root cause in nature; earthquake, hurricane, tornado, flash-floods, lightning fires etc.

post facto design: a study tailored to provide population characteristics from data collected after the impact or occurrence of an event.

psychological distress: a general term that identifies anxiety or suffering through the influence of the mind or emotions.

psychological impact: changes in patterns of depression, anxiety, post-traumatic stress, substance-induced mood disorders, and somatic disorders which emerge in individuals.

post-traumatic stress disorder (PTSD): a psychological condition resulting from exposure to a traumatic event. Typical PTSD symptoms include re-experiencing the traumatic event, numbing of responsiveness or reduced involvement with the external world, hyper alertness, sleep disturbance, survival guilt, memory or concentration problems, and avoidance of situations that symbolize the traumatic event.

qualitative data: verbal responses which are used as data by interpretative analysis.

quantitative data: are numerical responses which are entered into a data set for mathematical (quantitative) analysis of associations between variables.

resources: anything that can be looked upon as a source of support or aid.

resource dependent community: a community with social and economic reliance on the renewable or non-renewable resources of a geographic area.

object resources: built objects which are of public value: car, boat, business, home, etc.

conditions resources: personal situations which are considered of value: tenure, marriage, interpersonal relationships, etc.

personal characteristics resources: are those valued assessments of one's self; social assurance, self-esteem, self-concept, and sense of mastery.

energies resources: source of aid or support in the form of owed favors, credit and money.

social impact: following a disaster the pattern of change in social relationships in a community.

split-half reliability: the use of multiple indicators of the same concept, divided in two halves and the correlation between the two halves are used to provide an estimate of the degrees to which different operations of the same concept yield the same results.

statistically significant associations: tested inference that associations based on a sample of observations also hold true for the population from which the sample was selected.

Symptoms Checklist 90- Revised (SCL90-R): a self-report psychological test designed to measure psychological symptom patterns.

Symptoms Checklist 90-Revised (SCL90-R) Depression: a subscale of the SCL90-R which measures symptoms of clinical depression such as depressed mood, signs of withdrawal, lack of motivation, and loss of energy.

Symptoms Checklist 90-Revised (SCL90-R) Anxiety: a subscale of the SCL90-R which measures symptoms of outward anxiety, such as nervousness, tension, feelings of terror, apprehension and troubling thoughts.

Symptoms Checklist 90-Revised (SCL90-R) Hostility: a subscale of the SCL90-R which reflects thoughts, feelings, or actions that are characteristic of anger.

technological disaster: a catastrophic event caused by humans which results in toxic contamination of the environment.

test-retest reliability: the use of the same indicator at different points in time, yielding the same correlated results from one time to the next.

validity: the degree to which an operation results in a measure that accurately reflects the concept it is intended to measure.

Appendix A: The Survey Instrument

CORDOVA FISHERS SURVEY

PART I

We are the research team studying the community impacts of the Exxon Valdez oil spill. We began our study in August, 1989 and have continued our research since that time. We are asking you to participate in a new phase of our research by completing this survey.

We have represented the social scientific community during the last five years and our publications can be found in the Cordova City Library. The present project is funded by the Regional Citizens' Advisory Council. The objective of this survey is the identification of information which may aid Alaskan coastal communities in developing intervention programs in the event of future oil spills.

Participation in this study is completely voluntary. We are interviewing people who were commercial fishers in the Cordova community in 1989. We are not requesting nor do we want names or addresses on any portion of this survey. Your confidentiality and anonymous participation will be protected by a Certificate of Confidentiality, which has been issued by the National Institute of Mental Health for this survey. In accordance with this certificate, we as researchers may not be compelled to identify research subjects in any civil, criminal administrative, legislative, or other proceedings whether Federal, State, or Local.

There are no right or wrong answers to the statements in this survey. We are interested in your experiences and perceptions. If you are unsure of an answer, please give us your best guess. Further, if you consider any question as an invasion of your privacy, you may decline to answer that question. Please provide us with your own responses by completing this survey without discussing it with anyone else.

Thank you for participating in our study. If there is anything else you would like to share with us, please feel free to comment in the appropriate section of the survey.

Please do not make any marks in the columns to the left of the question numbers. They are provided for coding purposes only. Thank you.

I. **Instructions:** The following questions and statements require you to fill in the blank or circle the response to the statement you most agree with.

- _____ 1. How many years have you lived in Cordova? _____
- _____ 2. How many people live in your household? _____
- _____ 3. How many dependent children live in your household? _____
- _____ 4. What is your marital status?
1. married 2. divorced 3. single 4. widow 5. other _____
- _____ 5. What is your ethnic group?
1. White 2. Alaska Native 3. Other _____
- _____ 6. What is your gender?
1. Male 2. Female
- _____ 7. What is your current fishing occupation? Please circle all that apply.
1. Owner Comment:
2. Skipper
3. Canner
4. Tender Captain
5. Spotter Pilot
6. Deckhand
7. Other _____.
- _____ 8. What was your fishing occupation in 1989? Please circle all that apply.
1. Owner Comment:
2. Skipper
3. Canner
4. Tender Captain
5. Spotter Pilot
6. Deckhand
7. Other _____.
- _____ 9. Years of education:
1. Some high school
2. High School Diploma
3. Some college, no degree
4. College degree
5. College degree plus graduate studies
6. Masters degree
7. Professional degree

_____ 10. Do you have relatives that live in Cordova?

1. Yes 2. No

_____ 11. On average, how many months do you live in Cordova annually?

- | | |
|-------------|---------------|
| 1. 1 month | 7. 7 months |
| 2. 2 months | 8. 8 months |
| 3. 3 months | 9. 9 months |
| 4. 4 months | 10. 10 months |
| 5. 5 months | 11. 11 months |
| 6. 6 months | 12. 12 months |

_____ 12. For the year 1994, estimate your total household income.
Amount _____

13. Did you experience economic loss or gain in the years following the Exxon Valdez oil spill? Please estimate overall loss or gain for each year by circling your response and providing a dollar figure.

_____ 1989	1. Loss	2. No Change	3. Gain	\$Amount _____
_____ 1990	1. Loss	2. No Change	3. Gain	\$Amount _____
_____ 1991	1. Loss	2. No Change	3. Gain	\$Amount _____
_____ 1992	1. Loss	2. No Change	3. Gain	\$Amount _____
_____ 1993	1. Loss	2. No Change	3. Gain	\$Amount _____
_____ 1994	1. Loss	2. No Change	3. Gain	\$Amount _____
_____ 1995	1. Loss	2. No Change	3. Gain	\$Amount _____

_____ 14. Did you go to work or take a second job to compensate for Commercial Fishing losses due to the oil spill (Please indicate part-time or full-time)?

1. Yes 2. No

_____ Job Title _____ 1. Part-Time 2. Full-Time

(If no, go to question 13.)

_____ a.) Was this job fishing or non-fishing?

1. Fishing 2. Non-fishing

_____ b.) Please estimate How much you earned annually from this job?
_____ (estimate as close as possible by dollar figure)

_____ c.) For how many years? _____

_____ 15. Did your spouse go to work or take a second job to compensate for Commercial fishing losses due to the oil spill (Please indicate part-time or full-time)?

1. Yes 2. No

_____ Job Title _____ 1. Part-Time 2. Full-Time

(If no, go to question 14.)

_____ a.) Was this job fishing or non-fishing related?

1. Fishing 2. Non-fishing

_____ b.) Please estimate How much your spouse earned annually from this job? _____ (estimate as close as possible by dollar figure).

_____ c.) For how many years? _____

_____ 16. Since the Exxon Valdez oil spill, have you received any substantial financial backing from a friend? If yes, please note approximate amount.

1. Yes 2. No

_____ Approximate Amount _____

_____ 17. Since the Exxon Valdez oil spill, have you received any substantial financial backing from a relative? If yes, please note approximate amount.

1. Yes 2. No

_____ Approximate Amount _____

_____ 18. Since the Exxon Valdez oil spill, have you received any substantial financial backing from a financial institution? If yes, please note approximate amount.

1. Yes 2. No

_____ Approximate Amount _____

_____ 19. Have you been forced to sell possessions to compensate for losses due to the spill?

1. Yes 2. No

_____ If yes, what type of Possessions? _____

_____ 20. Since the Exxon Valdez oil spill, in general, have your personal relationships with relatives:

1. Improved
2. Remained the same
3. Suffered, but did not end
4. Ended

_____ 21. Since the Exxon Valdez oil spill, in general, have your personal relationships with non-relatives:

1. Improved
2. Remained the same
3. Suffered, but did not end
4. Ended

_____ 22. Within the past year, approximately, how many times have you visited a physician? _____

_____ 23. Within the past year, have you been hospitalized?

1. Yes
2. No

_____ If so, how many times have you been officially admitted? _____

_____ 24. Within the past year, have you been prescribed any medication to treat a medical illness?

1. Yes
2. No

_____ 25. Prior to the Exxon Valdez oil spill, had you sought any professional help for emotional problems?

1. Yes
2. No

_____ 26. Within the past year, have you sought any professional help for alcohol abuse problems?

1. Yes
2. No

_____ 27. Concerning your physical health, since the Exxon Valdez oil spill, do you perceive yourself as having:

1. More health problems
2. Less health problems
3. The same amount

_____ 28. Concerning your emotional health, since the Exxon Valdez oil spill, do you perceive yourself as having:

1. More emotional problems
2. Less emotional problems
3. The same amount

_____ 29. With regards to getting along with others since the Exxon Valdez oil spill, do you perceive yourself as having:

1. More difficulty
2. less difficulty
3. The same amount

_____ 30. Have you been involved in any litigation involving the Exxon Valdez Oil Spill?

1. Yes
2. No

If YES, please check which of the following litigation actions you were a part of and the current status of your participation, if NO please go to question 29.

	Not Involved	Settlement Received	Settlement Pending	Dropped
_____ Alyeska	_____	_____	_____	_____
_____ Exxon (fishing)	_____	_____	_____	_____
_____ Exxon (subsistence)	_____	_____	_____	_____
_____ Exxon (other)	_____	_____	_____	_____

Clarification or Comment: _____

31. With regards to litigation involving the Exxon Valdez Oil Spill:

_____ 1.) Do you feel it has been as stressful as the spill?

1. Yes
2. No

_____ 2.) Has it evoked unpleasant memories?

1. Yes
2. No

_____ 3.) Has it lasted too long?

1. Yes
2. No

_____ 4.) In general, do you feel the litigation has been fair to you?

1. Yes
2. No

_____ 5.) In general, do you feel the litigation has been fair to Exxon?

1. Yes
2. No

- _____ 32. In your opinion, did the Exxon Valdez oil spill cause permanent damage to Prince William Sound?
1. Yes
 2. No
 3. It is too early to tell
- _____ 33. In your opinion, the Prince William Sound ecosystem:
1. Has already recovered
 2. Will recover in 5 years
 3. Will recover in 10 years
 4. Will recover in 15 years
 5. Will not recover in my lifetime
 6. Will never recover
- _____ 34. In your opinion, what are the chances another Exxon Valdez spill will occur in Prince William Sound in the next ten years?
- | | |
|------------|--------------|
| 1. 1 in 10 | 6. 6 in 10 |
| 2. 2 in 10 | 7. 7 in 10 |
| 3. 3 in 10 | 8. 8 in 10 |
| 4. 4 in 10 | 9. 9 in 10 |
| 5. 5 in 10 | 10. 10 in 10 |
- _____ 35. In general, organizations representing the petroleum industry:
1. Can be trusted
 2. Can't be trusted
- _____ 36. In general, federal agencies that were responsible for responding to the Exxon Valdez oil spill:
1. Can be trusted
 2. Can't be trusted
- _____ 37. In general, state agencies that were responsible for responding to the Exxon Valdez oil spill:
1. Can be trusted
 2. Can't be trusted
- _____ 38. In general, the residents of Cordova can be trusted:
1. Yes
 2. No

_____ 39. On a scale from 0-10, where 0 is the worst possible life being involved with commercial fishing, and 10 is the best possible life being involved with commercial fishing, where on this scale do you think you are now? _____

_____ 1.) Where were you on this scale before the spill? _____

_____ 2.) Where do you think you will be on this scale five years from now? _____

40. This year, 1995, do you feel that the Exxon Valdez oil spill has had an adverse affect on:

_____ 1.) Your family relationships? 1. Yes 2. No

Comment: _____

_____ 2.) Your future plans? 1. Yes 2. No

Comment: _____

_____ 3.) Your work/occupation? 1. Yes 2. No

Comment: _____

_____ 4.) The future plans of other family members? 1. Yes 2. No

Comment: _____

_____ 5.) The Cordova community? 1. Yes 2. No

Comment: _____

II. Sometimes people experience events in which they feel that their own or someone else's life may be in danger, or they may experience serious physical or emotional harm. Please indicate below if you have ever experienced any of the following events and as a result of that event felt that you or someone else was in serious danger. Please note the year of occurrence for those events you have experienced.

	YES	NO	Year
_____ 1. Military combat experience or military service in a war zone.	1	0	_____
_____ 2. A serious accident at work, in a car, or somewhere else.	1	0	_____
_____ 3. A natural disaster such as a tornado, earthquake, hurricane, or flood.	1	0	_____
_____ 4. Anyone - including family members or friends - attacked you with a gun, knife, or some other weapon.	1	0	_____
_____ 5. Anyone - including family members or friends - attacked you without a weapon, but with the intent to kill or seriously injure you.	1	0	_____
_____ 6. Any other situation in which you were seriously injured or suffered serious physical damage. Please describe: _____ _____ _____	1	0	_____
_____ 7. Any other situation in which you feared you might be killed or seriously injured. Please describe: _____ _____ _____	1	0	_____
_____ 8. A family member or close friend deliberately killed or murdered by another person or killed by a drunk driver	1	0	_____
_____ 9. You saw someone seriously injured or violently killed	1	0	_____
_____ 10. Any other extraordinarily stressful situation or event, besides the Valdez Oil Spill. Please describe: _____ _____ _____	1	0	_____

III. Please read these statements made by people after experiencing stressful life events. For each statement, please indicate by circling the appropriate number, how often it was true for you about the Exxon Valdez oil spill during the past seven (7) days. It might not have happened at all during the past week, or during the past week it might have occurred only rarely, sometimes, or often. (Circle one response for each statement.)

	Not at all	Rarely	Some- times	Often
_____ 1. I thought about it when I didn't want to. (The thought of the spill just popped into my head).	1	2	3	4
_____ 2. I avoided letting myself get upset when I thought about it or was reminded of it	1	2	3	4
_____ 3. I tried to remove it from my memory	1	2	3	4
_____ 4. I had trouble falling asleep or staying asleep	1	2	3	4
_____ 5. I had waves of strong feelings about it	1	2	3	4
_____ 6. I had dreams about it	1	2	3	4
_____ 7. I stayed away from reminders of it	1	2	3	4
_____ 8. I felt as if it hadn't happened or wasn't real	1	2	3	4
_____ 9. I tried not to talk about it	1	2	3	4
_____ 10. Pictures about it popped into my mind	1	2	3	4
_____ 11. Other things kept making me think about it	1	2	3	4
_____ 12. I was aware that I still had a lot of feelings about it, but I didn't deal with them	1	2	3	4
_____ 13. I tried not to think about it	1	2	3	4
_____ 14. Any reminder brought back feelings about it	1	2	3	4
_____ 15. My feelings about it were kind of numb	1	2	3	4

	Not at all	Rarely	Some- times	Often
_____ 16. I felt physically uncomfortable (heart racing, sweating, stomach upset) when I was reminded of the event	1	2	3	4
_____ 17. I was unable to remember some important aspects of the event	1	2	3	4
_____ 18. I felt I couldn't respond to things emotionally the way I used to	1	2	3	4
_____ 19. I was more jumpy than usual	1	2	3	4
_____ 20. I was more frequently on guard or extra alert to possible danger	1	2	3	4
_____ 21. I had more difficulty trusting others	1	2	3	4

IV. The following statement lists activities which people sometimes use to help them deal with their feelings after experiencing a negative or traumatic event. Please answer the following questions based on the activities you have engaged in to cope with the Exxon Valdez oil spill.

Since the Exxon Valdez oil spill I have:	Not at all	Rarely	Sometimes	Often
_____ 1. talked with friends or relatives about my problems	1	2	3	4
_____ 2. found myself often asking others for help	1	2	3	4
_____ 3. done things to get the attention of others	1	2	3	4
_____ 4. involved myself in recreation or pleasurable activities	1	2	3	4
_____ 5. bought some new things for myself	1	2	3	4
_____ 6. completed housework (cleaning, polishing, straightening)	1	2	3	4
_____ 7. expressed little emotion to others	1	2	3	4

Since the Exxon Valdez oil spill
I have:

Not at
all Rarely Sometimes Often

_____	8. complained to friends and relatives about my problems	1	2	3	4
_____	9. tried to take what came without letting it bother me and without complaining	1	2	3	4
_____	10. expressed anger that others were not making adequate efforts to help me	1	2	3	4
_____	11. become more involved in life and taken on more responsibilities	1	2	3	4
_____	12. tried not to bother other people with how I felt	1	2	3	4
_____	13. masked my true feelings when with others	1	2	3	4
_____	14. felt angry but held it in	1	2	3	4
_____	15. told myself that some good for others could come out of my misfortune	1	2	3	4
_____	16. let others tell me how to get better	1	2	3	4
_____	17. decided that there was a purpose behind my adversity	1	2	3	4
_____	18. let others see how bad I felt	1	2	3	4
_____	19. kept my feelings bottled up inside	1	2	3	4
_____	20. done something constructive	1	2	3	4
_____	21. depended on my family or friends more than usual	1	2	3	4
_____	22. told myself that my problems would pass	1	2	3	4
_____	23. tried to act as if I wasn't feeling bad	1	2	3	4
_____	24. sought information from professional experts	1	2	3	4

V. The following questions request that you list information regarding your permit activities since 1989. Please feel free to write in the margins if necessary.

1. Please list all Alaska fishing permits affected by the Exxon Valdez oil spill that you owned or were entitled to fish in 1989. For each permit that you owned, what was the estimated value of the permit?

	<u>Fishery</u>	<u>Area</u>	<u>Gear type</u>	<u>Estimated Value In 1989</u>
_____	a.	_____	_____	_____
_____	b.	_____	_____	_____
_____	c.	_____	_____	_____
_____	d.	_____	_____	_____

2. Please list all Alaska fishing permits affected by the Exxon Valdez oil spill that you own or are entitled to fish in 1995. For each permit that you own, what is the current estimated value of the permit?

	<u>Fishery</u>	<u>Area</u>	<u>Gear type</u>	<u>Estimated Value Today</u>
_____	a.	_____	_____	_____
_____	b.	_____	_____	_____
_____	c.	_____	_____	_____
_____	d.	_____	_____	_____

3. For each permit you owned in 1989 that you have sold, please indicate type of permit, the year sold, and the selling price.

	<u>Type</u>	<u>Date</u>	<u>Price</u>
_____	a.	_____	_____
_____	b.	_____	_____
_____	c.	_____	_____
_____	d.	_____	_____

4. For any permit you may have purchased since 1989, please indicate the type of permit purchased, the year you bought it and the cost.

	Type	Date	Price
_____	a.	_____	_____
_____	b.	_____	_____
_____	c.	_____	_____
_____	d.	_____	_____

VI. Following most disasters, community programs are initiated to aid community recovery. Please indicate which of the following programs you would be interested in or feel that others in Cordova would be interested in. A brief description of each program is provided and your comments and suggestions are encouraged.

1. PEER COUNSELING: Community volunteers would be trained in brief counseling techniques and would be available formally and informally for supportive counseling, assistance in identifying resources, and other crisis needs of individuals.

_____ 1. Concerning this program I would be:

1. Very interested
2. Somewhat interested
3. Not interested

_____ 2. Concerning this program I feel others in Cordova would be:

1. Very interested
2. Somewhat interested
3. Not interested

2. STRESS MANAGEMENT WORKSHOPS: A series of six to eight workshops focusing on topics such as reducing stress, dealing with anger, family relationships, communication, etc. Workshops would be limited to 8-10 volunteer participants.

_____ 1. Concerning this program I would be:

1. Very interested
2. Somewhat interested
3. Not interested

- _____ 2. Concerning this program I feel others in Cordova would be:
1. Very interested
 2. Somewhat interested
 3. Not interested

3. COMMUNITY EDUCATION: A series of six to eight videotapes would be shown on local television. Programs would focus on coping with the lasting effects of disaster and strategies for community and individual recovery.

- _____ 1. Concerning this program I would be:
1. Very interested
 2. Somewhat interested
 3. Not interested

- _____ 2. Concerning this program I feel others in Cordova would be:
1. Very interested
 2. Somewhat interested
 3. Not interested

4. NEWSPAPER EDUCATION: A series of articles published in the local newspaper focusing on issues related to disaster recovery.

- _____ 1. Concerning this program I would be:
1. Very interested
 2. Somewhat interested
 3. Not interested

- _____ 2. Concerning this program I feel others in Cordova would be:
1. Very interested
 2. Somewhat interested
 3. Not interested

COMMENTS AND SUGGESTIONS ON OTHER COMMUNITY PROGRAM ACTIVITIES: _____

THANK YOU

Please go on to part II of this survey

Part II

PART II

Cordova Fishers Survey

Now go to instructions inside of this booklet.

- ◆ You do not have to write your name, age or gender.
- ◆ You may use a pen or lead pencil to complete the survey.
- ◆ Fill in space that best describes your response.
- ◆ Upon completion, please place both Part I and Part II of survey in return envelope and mail.

Thank You!

SCL-90-R[®]

Symptom Checklist-90-R

Leonard R. Derogatis, PhD

_____	_____	_____
Last Name	First	MI

Number		
_____	_____	____/____/____
Age	Gender	Test Date

DIRECTIONS:

1. Print your name, identification number, age, gender, and testing date in the area on the left side of this page.
2. Use a lead pencil only and make a dark mark when responding to the items on pages 2 and 3.
3. If you want to change an answer, erase it carefully and then fill in your new choice.
4. Do not make any marks outside the circles.

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DO NOT SEND TO NATIONAL COMPUTER SYSTEMS
USE ONLY FOR HAND SCORING

Product Number
05618

NOT AT ALL
 A LITTLE BIT
 MODERATELY
 QUITE A BIT
 EXTREMELY

HOW MUCH WERE YOU DISTRESSED BY:

0	1	2	3	4	Having to do things very slowly to insure correctness
0	1	2	3	4	Heart pounding or racing
0	1	2	3	4	Nausea or upset stomach
0	1	2	3	4	Feeling inferior to others
0	1	2	3	4	Soreness of your muscles
0	1	2	3	4	Feeling that you are watched or talked about by others
0	1	2	3	4	Trouble falling asleep
0	1	2	3	4	Having to check and double-check what you do
0	1	2	3	4	Difficulty making decisions
0	1	2	3	4	Feeling afraid to travel on buses, subways, or trains
0	1	2	3	4	Trouble getting your breath
0	1	2	3	4	Hot or cold spells
0	1	2	3	4	Having to avoid certain things, places, or activities because they frighten you
0	1	2	3	4	Your mind going blank
0	1	2	3	4	Numbness or tingling in parts of your body
0	1	2	3	4	A lump in your throat
0	1	2	3	4	Feeling hopeless about the future
0	1	2	3	4	Trouble concentrating
0	1	2	3	4	Feeling weak in parts of your body
0	1	2	3	4	Feeling tense or keyed up
0	1	2	3	4	Heavy feelings in your arms or legs
0	1	2	3	4	Thoughts of death or dying
0	1	2	3	4	Overeating
0	1	2	3	4	Feeling uneasy when people are watching or talking about you
0	1	2	3	4	Having thoughts that are not your own
0	1	2	3	4	Having urges to beat, injure, or harm someone
0	1	2	3	4	Awakening in the early morning
0	1	2	3	4	Having to repeat the same actions such as touching, counting, or washing
0	1	2	3	4	Sleep that is restless or disturbed
0	1	2	3	4	Having urges to break or smash things
0	1	2	3	4	Having ideas or beliefs that others do not share
0	1	2	3	4	Feeling very self-conscious with others
0	1	2	3	4	Feeling uneasy in crowds, such as shopping or at a movie
0	1	2	3	4	Feeling everything is an effort
0	1	2	3	4	Spells of terror or panic
0	1	2	3	4	Feeling uncomfortable about eating or drinking in public
0	1	2	3	4	Getting into frequent arguments
0	1	2	3	4	Feeling nervous when you are left alone
0	1	2	3	4	Others not giving you proper credit for your achievements
0	1	2	3	4	Feeling lonely even when you are with people
0	1	2	3	4	Feeling so restless you couldn't sit still
0	1	2	3	4	Feelings of worthlessness
0	1	2	3	4	The feeling that something bad is going to happen to you
0	1	2	3	4	Shouting or throwing things
0	1	2	3	4	Feeling afraid you will faint in public
0	1	2	3	4	Feeling that people will take advantage of you if you let them
0	1	2	3	4	Having thoughts about sex that bother you a lot
0	1	2	3	4	The idea that you should be punished for your sins
0	1	2	3	4	Thoughts and images of a frightening nature
0	1	2	3	4	The idea that something serious is wrong with your body
0	1	2	3	4	Never feeling close to another person
0	1	2	3	4	Feelings of guilt
0	1	2	3	4	The idea that something is wrong with your mind

Appendix B: Statistical Calculations

Table 2: Objective resource loss by level of depression

	(N=77) Low Depression %	(N=36) High Depression %
Sold possessions to compensate for spill.	35.1 (27)	51.4 (19)
Did not sell possessions to compensate for spill.	64.9 (50)	48.6 (17)
	----- 100.0	----- 100.0

²
 $X = 3.1887$; $Pr \leq .0742$

Table 3: Objective resource loss by level of PTSD

	(N=77) Low PTSD %	(N=36) High PTSD %
Sold possessions to compensate for spill.	33.8 (26)	55.6 (20)
Did not sell possessions to compensate for spill.	66.2 (51)	44.4 (16)
	————— 100.0	————— 100.0

2
 $X = 4.8253$; $Pr \leq .0280$

Table 4: Resource loss spiral by depression

	(N=71) Low Depression %	(N=34) High Depression %
Not involved in a loss spiral.	83.1 (59)	64.7 (22)
In a loss spiral.	16.9 (12)	35.3 (12)
	————— 100.0	————— 100.0

²
 $X = 4.4108$; $Pr \leq .0357$

Table 5: Resource loss spiral by PTSD

	(N=70) Low PTSD %	(N=35) High PTSD %
Not involved in a loss spiral.	82.9 (58)	65.7 (23)
In a loss spiral.	17.1 (12)	34.3 (12)
	100.0	100.0

2
 $X = 3.8889$; $Pr \leq .0486$

Table 6: Investment of resources without gain by depression

	(N=54) Low Depression %	(N=28) High Depression %
Low investment of resources without gain.	81.5 (44)	60.7 (17)
High investment of resources without gain.	18.5 (10)	39.3 (11)
	—————	—————
	100.0	100.0

2
 $\chi^2 = 4.1742$; $Pr \leq .0410$

Table 7: Investment of resources without gain by PTSD

	(N=52) Low PTSD %	(N=30) High PTSD %
Low investment of resources without gain.	82.7 (43)	60.0 (18)
High investment of resources without gain.	17.3 (9)	40.0 (12)
	—————	—————
	100.0	100.0

2
 $\chi^2 = 5.1422$; $Pr \leq .0234$

Table 8: Conditions resource loss by level of depression

As a result of the spill..	(N=78) Low Depression %	(N=36) High Depression %
Relations with relatives suffered.	26.9 (21)	61.1 (22)
Relations with relatives did not suffer.	73.1 (57)	38.9 (14)
	100.0	100.0

²
 $X = 12.2553$; $Pr \leq .0005$

Table 9: Conditions resource loss by level of PTSD

As a result of the spill..	(N=78) Low PTSD %	(N=36) High PTSD %
Relations with relatives suffered.	26.9 (21)	61.1 (22)
Relations with relatives did not suffer.	73.1 (57)	38.9 (14)
	100.0	100.0

²
 $\chi^2 = 12.2553; Pr \leq .0005$

Table 10: Conditions resource loss by level of depression

As a result of the spill...	(N=77) Low Depression %	(N=36) High Depression %
Relations with non-relatives suffered.	33.8 (26)	69.4 (25)
Relations with non-relatives did not suffer.	66.2 (51)	30.6 (11)
	100.0	100.0

2
 $\chi^2 = 12.6100$; $Pr \leq .0004$

Table 11: Conditions resource loss by level of PTSD

As a result of the spill...	(N=77) Low PTSD %	(N=36) High PTSD %
Relations with non-relatives suffered.	35.1 (27)	66.7 (24)
Relations with non-relatives did not suffer.	64.9 (50)	33.3 (12)
	100.0	100.0

2
 $\chi^2 = 9.8931$; $P < .0017$

Table 12: Conditions resource loss by level of depression

As a result of the spill...	(N=79) Low Depression %	(N=36) High Depression %
Family relations were adversely affected.	39.2 (31)	77.8 (28)
Family relations were not adversely affected.	60.8 (48)	22.2 (8)
	100.0	100.0

2
 $\chi^2 = 14.7011$; $Pr \leq .0001$

Table 13: Conditions resource loss by level of PTSD

As a result of the spill...	(N=79) Low PTSD %	(N=36) High PTSD %
Family relations were adversely affected.	39.2 (31)	77.8 (28)
Family relations were not adversely affected.	60.8 (48)	22.2 (8)
	100.0	100.0

2
 $\chi^2 = 14.7011$; $Pr \leq .0001$

Table 14: Conditions resource loss by level of depression

As a result of the spill...	(N=79) Low Depression %	(N=36) High Depression %
Experiencing more physical health problems.	39.2 (31)	63.9 (23)
Not experiencing more physical health problems.	60.8 (48)	36.1 (13)
	100.0	100.0

2
 $\chi^2 = 6.0323$; $Pr \leq .0141$

Table 15: Conditions resource loss by level of PTSD

As a result of the spill...	(N=79) Low PTSD %	(N=36) High PTSD %
Experiencing more physical health problems.	39.2 (31)	63.9 (23)
Not experiencing more physical health problems.	60.8 (48)	36.1 (13)
	100.0	100.0

2
 $\chi^2 = 6.0323$; $Pr \leq .0141$

Table 16: Conditions resource loss by level of depression

As a result of the spill...	(N=79) Low Depression %	(N=36) High Depression %
Experiencing more emotional health problems.	50.1 (40)	100.0 (36)
Not experiencing more emotional health problems.	49.9 (39)	0.0 (0)
	100.0	100.0

2
 $\chi^2 = 26.8921; Pr \leq .0000$

Table 17: Conditions resource loss by level of PTSD

As a result of the spill...	(N=79) Low PTSD %	(N=36) High PTSD %
Experiencing more emotional health problems.	51.9 (41)	97.2 (35)
Not experiencing more emotional health problems.	48.1 (38)	2.8 (1)
	100.0	100.0

2
 $\chi^2 = 22.6671; Pr \leq .0000$

Appendix K
**“Mitigating the Chronic Community Impacts of Localized
Environmental Degradation:
A Case Study of the *Exxon Valdez* Oil Spill”**

Following is an evaluation report prepared by J. Steven Picou, G. David Johnson, and Duane A. Gill describing a review of the Growing Together Community Education Program implemented in Cordova, Alaska.

**Mitigating the Chronic Community Impacts of Localized Environmental
Degradation: A Case Study of the *Exxon Valdez* Oil Spill***

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Report on the evaluation of the Growing Together Community Education Program, implemented as a Mental Health Demonstration Project in Cordova, Alaska (1996-97). This project was sponsored by the Prince William Sound Regional Citizens' Advisory Council, Community Impacts Planning Subcommittee. The analysis and interpretations contained herein are the sole responsibility of the authors and in no way reflects position or policy of the Prince William Sound Regional Citizens' Advisory Council.

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Mitigating the Chronic Community Impacts of Localized Environmental Degradation: A Case Study of the *Exxon Valdez* Oil Spill

Introduction

On March 24, 1989, the supertanker *Exxon Valdez* ran aground on Bligh Reef in Prince William Sound, Alaska, releasing 42 million liters of oil into local waters. This event initiated a massive technological disaster with significant, long lasting effects on both the non-human and human environments of southcentral coastal Alaska (Spies *et al* 1996). In particular, the effects on humans, occurring at both individual and social levels, are chronic, continuing to the present, some eight years after the beginning of the disaster. These chronic effects include elevated levels of psychological stress among many area residents, and a damaged social community, characterized by heightened mistrust and disruption. (for example, see: Palinkas *et al* 1993; Picou *et al* 1997).

Beginning in 1994, the Prince William Sound Regional Citizens Advisory Council (RCAC) contracted with faculty members at the University of South Alabama to design and implement a community demonstration program to mitigate long-term social and psychological impacts of this disaster in the town of Cordova, Alaska. The present report describes that intervention and presents preliminary results of a systematic evaluation of its effectiveness.

Technological Disasters and Community Recovery

Any event that is "extraordinary," or beyond normal everyday experiences, is potentially a stressor to people and communities. Disasters qualify as such "extraordinary events" and both natural disasters (hurricanes, floods, earthquakes) and technological disasters (toxic contamination, plant explosions, oil spills) disrupt communities and generate collective stress (Fritz 1961; Kroll-Smith and Couch 1993A; Erikson 1994). Individual and community recovery from such events has been defined primarily in terms of reconstructing the built and modified environments damaged by the event.

Community recovery from natural disasters can be defined as "longer term efforts to rebuild the disaster-stricken community and its institutions" (Tierney 1989). The restoration of damages and services to the built environment is a primary goal of communities impacted by natural disasters. In contrast, technological disasters are characterized by impacts which are significantly different. The concept of community recovery must be sensitive to such differences in order to design programs which will have positive consequences for victimized communities. Nonetheless, the management of community recovery from any disaster is best achieved when the resources of **knowledge, leadership and expert action** are available (Rubin *et al*.1985).

One of the most consistently identified characteristics of technological disasters is the chronic nature of their impacts. The fact that community recovery remains problematic for victims of technological disasters clearly distinguishes these events from natural disasters (Baum and Fleming 1993; Kroll-Smith and Couch 1993A; 1993B). Environmental contamination can last for decades, if not centuries. This puts individuals and communities under tremendous stress over a protracted period of time. Instead of progressing through a typical natural disaster stage model, from "warning", to "threat," to "impact," and subsequently to "recovery" and "rehabilitation", cases of toxic contamination become locked in the early stages (see Figure 1). Over time, "warning," "threat" and "impact" are reported in a continuing sequence (Couch 1996). Furthermore, given that ambiguous evidence regarding

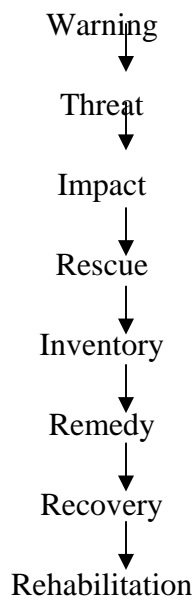
contamination and its consequences abound, different parts of the community come to see the problem as being in a different stage, providing another source of community conflict. Many members of the victimized community see the problem as "overblown" by their neighbors, while others believe that threats are not taken seriously enough (Kroll-Smith and Couch 1993A; 1993B; Couch 1996).

Additional community strain is caused by the fact that, since the disaster agent is extended through time, individual and social recovery must be attempted while efforts are simultaneously being extended to respond to the continuing threat posed by technology, contamination and litigation. Community recovery cannot wait until the technological disaster is over, but must take place while the disaster is ongoing. Communities, while refocused to deal with a temporary problem, often find themselves over extended through time. Many individuals respond to this situation with symptoms similar to those found for victims of post-traumatic stress disorder (see Couch, Kroll-Smith and Wilson 1996), but in this case the trauma is not "post," but ongoing, i.e., in process.

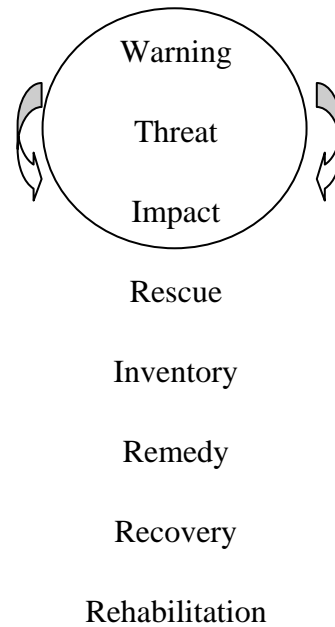
One way of summarizing this discussion is to focus on the types of recovery needs communities have for different types of disasters. We will contrast a flood with toxic contamination and compare both to the *Exxon Valdez* Oil Spill (EVOS). Figure 2 represents differences usually found between natural and technological disasters. While material and economic recovery needs are high priority for natural disasters, recovery from technological disasters center around environmental, psychological, social, and cultural needs. Such strikingly different needs logically require innovative recovery strategies. Indeed, when contrasted to the EVOS, natural disasters appear less destructive and most important, non-threatening, reducing the need for long-term social and psychological recovery programs. The opposite pattern holds for the EVOS and other cases of toxic contamination (Baum and Fleming 1993; Picou et al 1997).

Figure 1. Natural and Technological Disaster Stage Models

NATURAL DISASTERS



TECHNOLOGICAL DISASTERS



This point can be illustrated by looking at what finally happens in identified environmental contamination situations (Couch 1996; Couch and Kroll-Smith 1985). Generally, we find that cases fall along a continuum between two main outcomes. The first is relocation -- the people are moved away from the problem. Personal safety and viability is recovered, but at the loss of the community and of a certain geographical area, or resource. The second category can be termed a "technofix," that is a technological solution is implemented which renders the community safe again and allows community recovery to proceed. A problem here, however, is that sure-fire technological solutions and scientific understanding of contamination and contamination-related problems (such as destruction of a natural resource) usually do not exist (Couch 1996). Therefore, both experts and victims will disagree over whether technological solutions are adequate, or even possible. This results in a cycling back to controversy or conflict over the definition of the problem and what to do about it. In other words, a pattern of chronic social distress emerges and is constantly reinforced by ongoing debate, conflict and confusion.

Technological disasters, unlike natural ones, have a human cause or a "principle responsible party" and involve some form of irresponsible contamination of the environment, home, workplace and/or person (Erikson 1994). The response of the community, rather than therapeutic, may be "corrosive," fostering continued conflicts (versus cooperation), mistrust and alienation (Freudenburg and Jones 1991). Although the physical impacts of natural and technological disasters may be similar in magnitude, the social and psychological impacts are very different. The most important difference concerns the meaning of the event: the fact that the technological disaster was caused by a human agent, rather than an act of God or nature. As a consequence, psychological and social recovery from such disasters is more problematic (Couch 1996).

Disruption and Distress in Cordova

The present project focuses on the town of Cordova located on the southeastern edge of Prince William Sound. This community is economically dependent on commercial fishing with approximately 50% of its labor force employed in fisheries harvest and processing occupations (Fried 1994). The community includes a significant minority (18% of its year round population) that is Alaska Native in ethnicity, with a long cultural history of subsistence harvests. Both commercial fishermen and Alaska Natives are at elevated risk for disaster impacts because of their dependence on the local natural resources. Impacts from the spill on Cordova were substantial and multidimensional. Documented impacts include the following: (1) Declines in subsistence harvest by Alaska Natives through 1991 (Fall and Field 1996); (2) Disruption of social and cultural activities among Alaska Natives (Gill and Picou 1997); (3) Elevated levels of depression among Alaska Natives (Palinkas *et al* 1992); (4) Economic losses from commercial fishing during 1989 and 1990 totaling 155 million dollars (Cohen 1997); and (5) Elevated levels of event-related psychological distress among Cordova residents from 1989 through 1992 (Picou *et al* 1992; Picou and Gill 1996).

Figure 2. Community Recovery Needs by Type of Disasterⁱ

RECOVERY NEED	DISASTER TYPE		
	Flood	Toxic Contamination	EVOS
Material	Extensive	Minimal	Minimal
Economic	Extensive/Rebuilt	Moderate	Extensive/Threatening
Environmental	Minimal	Extensive/Threatening	Extensive/Threatening
Biological	Minimal	Moderate	Minimal
Psychological	Minimal	Extensive	Extensive
Social	Minimal	Extensive	Extensive
Cultural	Minimal	Extensive	Extensive

ⁱ Adopted from Couch 1996
 Coping With Technological Disasters • 12/04 • Appendix K

Tables 1 and 2 present findings documenting this latter impact. These tables present measures for the following types of distress: intrusive stress, avoidance behavior, and global stress. Intrusive stress measures psychic difficulties surrounding a traumatic event which interfere with normal functioning. Avoidance behavior refers to the use of intended and unintended coping strategies whereby the victim changes behavior, effectively putting the event out of consciousness. Global stress is the additive total for the two subscales (Horowitz 1976; Horowitz *et al* 1979). The symptoms of global stress correspond closely to those for post-traumatic stress disorder, a DSM-IV mental disorder. Table 1 presents basic statistical information about each of the measures of distress. Data described in Tables 1 and 2 were collected in the impact community, Cordova, and a comparison community, Petersburg. Petersburg is a small fishing town, very similar in social characteristics to Cordova, but was not directly impacted by the *Exxon Valdez* oil spill (see Picou *et al* 1992; Picou and Gill 1996).

Table 1. Properties of Psychological Distress Measures, 1997 Cordova and Petersburg Samples Combined

Measure	Mean	Std. Deviation	Range	Alpha
Intrusion	5.1	7.2	0-33	.86
Avoidance	4.8	7.5	0-40	.86
Global Stress	9.9	12.9	0-61	.89

(n=400)

Table 2. Psychological Distress Outcomes (Means), Cordova (C) and Petersburg (P), 1989-92

	Intrusive Stress		Avoidance Behavior		Global Stress		n	
	<u>C</u>	<u>P</u>	<u>C</u>	<u>P</u>	<u>C</u>	<u>P</u>	<u>C</u>	<u>P</u>
1989	16.5	11.1	11.1	5.0	27.6	16.1	117	73
1990	10.1	3.7	9.6	1.5	19.7	5.2	68	53
1991	9.4	2.4	7.3	1.5	16.7	3.9	221	102
1992	8.5	2.8	8.1	2.1	16.6	4.9	151	59

All differences in stress levels between Cordova and Petersburg presented in Table 2 are statistically significant (t-test; $p < .05$). Immediately following the spill in 1989, very high levels of stress were present in both Cordova and Petersburg on all measures. As expected, the higher levels of stress were experienced in the community directly affected by the spill: Cordova. Note that levels had fallen dramatically in Petersburg by 1990, but remained much higher in Cordova through 1992. This finding is consistent with the pattern of technological disasters described in the theoretical and empirical literature — the social and psychological stress which results from contamination from a technological disaster tends to be chronic in nature. These results clearly identify the community need which led to the development of the mitigation program (Picou *et al* 1992; Picou and Gill 1996; Gill and Picou 1997).

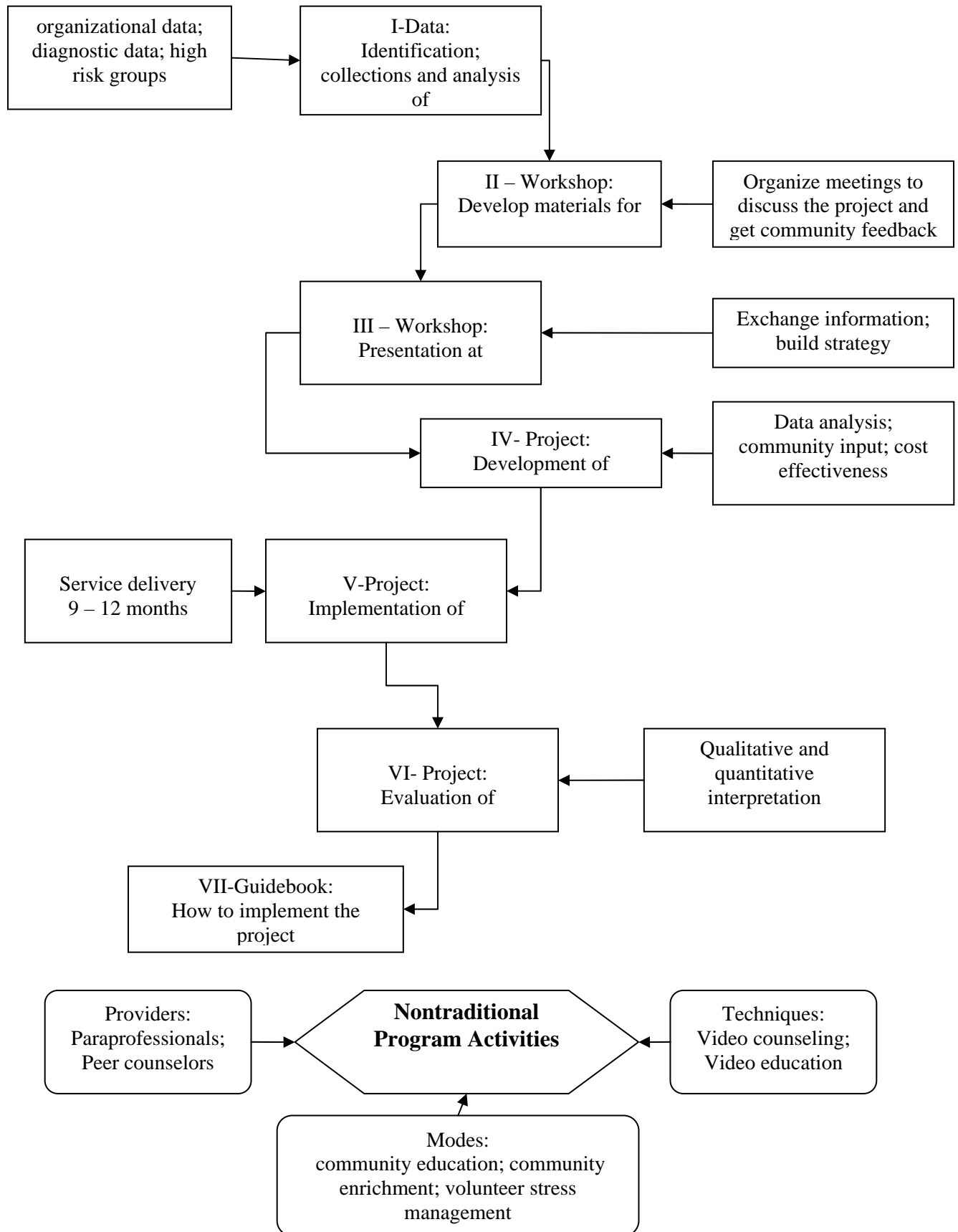
Community Recovery: A Model for Program Design

Given that no programs exist for reducing the chronic community impacts of technological disasters, a data-based model for program design was developed. This model offered maximum participation for community organizations, local community leaders and residents. Figure 3 provides an outline of activities that constituted the model. The fact that disaster intervention programs have generally focused on immediate response and a recovery strategy that attempts to restore the built and modified environments required an empirical identification of program characteristics and strategies which would be effective for reducing chronic mental health impacts. Information was derived from a sequential organization of project activities which was initiated by the analysis of data, program development, program implementation, and program evaluation. The organization of activities for developing this mental health mitigation program will be discussed below.

Phase I. Data Identification and Analysis: The first phase of the mitigation program required an in-depth analysis of available data on the chronic mental health impacts of the EVOS. Current evidence suggested that patterns of chronic stress existed. However, additional analysis of available data provided more detailed information on the nature and type of negative mental health impacts for specific sub-groups, e.g., commercial fishermen, Alaska-Natives, and females. Furthermore, information on the characteristics of coping strategies and the utility of such strategies for reducing negative community impacts were analyzed. Collection of clinical psychological information directed by the secondary analysis of data provided more detailed information for designing intervention programs. Commercial fishermen were found to be characterized by severe depression, anxiety and spill related post-traumatic stress disorder (Picou and Arata 1997).

Phase I resulted in the development of a mental health profile for the target community. This mental health profile provided detailed information on the psychological impacts of the oil spill over a six-year period. This information was used to develop workshop materials for Phase II.

Figure 3. Mental Health Demonstration Project Activities



Phase II. Workshop Presentations: The community mental health data provided information for the development of a series of community workshops. These workshops were tailored to the Cordova community and for high-risk sub-groups identified from the data-analysis (Phase I). Workshops were conducted with mental health staff in Cordova and Valdez. Additional workshops were conducted in Cordova for Alaska-Natives, commercial fishermen, and identified high-risk sub-groups. A series of shorter, information-based presentations were also made to local civic and education organizations, members of the local scientific community and the general public. These presentations were structured to provide information to a broad representation of the local community regarding community mental health and the status and objectives of the mental health demonstration project.

These workshops resulted in the verification of the nature and types of mental health problems experienced in Cordova and for specific sub-groups. The workshops also resulted in the identification of the required elements for developing specific mental health mitigation strategies. The identification of intervention strategies came from workshop activities designed to promote the collaborative identification of programmatic alternatives in light of scientifically-identified mental health impacts.

Phase III. Mental Health Mitigation Program Identification: This phase of the project utilized information gathered from Phase II workshop activities to construct a mental health mitigation program. The developed program was structured in terms of current clinical programs and traditional methods used in community psychology. Specific mitigation strategies were identified, developed and evaluated in terms of cost-effectiveness and appropriateness for introduction and implementation in the Cordova community.

Phase IV. Program Implementation and Monitoring: Following the identification of the required elements for the mental health mitigation program and the specific intervention strategies selected, the program was introduced to the community through two local mental health organizations. The program and specific intervention strategies were monitored by local professionals and project staff whenever possible. However, personnel turnover in both local organizations precluded maximum project support over the 12 month project implementation period.

Phase V. Program Evaluation and Program Implementation Guide for Mental Health Workers: The final phase of the project consists of the present evaluation which aims to provide an understanding of what types of practical intervention strategies effectively mitigate the negative mental health impacts of oil spills. In addition, in Phase V, a program implementation guide was drafted and distributed to the Community Impacts Subcommittee of the Prince William Sound Regional Citizens' Advisory Council.

The logic of the intervention model used in Cordova was based on a community education model. It was felt by leaders and other members of the community that residents needed information about the common and expected effects of technological disasters on victims; on effective coping responses; and on available professional and lay resources within the community to provide assistance for coping. Outreach was a critical component of the intervention, since so many in need of services were not utilizing existing resources. Finally, it was felt that intervention programs must be culturally appropriate, with a specific component designed for local Alaska Native culture.

Goals. The overriding goal of the community demonstration project was to mitigate the chronic social and psychological impacts of the *Exxon Valdez* oil spill on individual residents, and the community, of Cordova. More specifically, the objectives were to: (1) To involve a significant proportion of the community in program activities; (2) To involve people in need in program activities;

(3) To increase knowledge about the effects of technological disasters; (4) To increase knowledge about effective strategies for coping with stress; (5) To increase help seeking behavior directed at both professional and lay providers; (6) To improve social relationships among Cordova residents; (7) To strengthen community ties among residents; (8) To strengthen ties among Alaska Natives to one another and to cultural traditions; (9) To reduce levels of psychological distress among residents; (10) To reduce the differences in distress between the residents of Cordova with those of the comparison community of Petersburg; and, (11) To develop a model for mitigation of chronic impacts that can be implemented elsewhere in communities where technological disasters occur.

Program Components. The “Growing Together Community Education Program” consisted of six components, each of which is described in Figure 4. A series of nine original newspaper articles, five original radio broadcasts, and nine original leaflets were prepared, distributed or broadcast. These educational materials focused on the effects of technological disasters, the nature of collective and individual distress, and effective coping skills. An in-service training program was developed for education and law enforcement professionals in the community, with training on the scope of problems in the community, intervention strategies, and on the nature of technological disasters, distress, and coping. An important outreach component was the Peer Listener Program, which involved the recruitment and training of volunteers in lay intervention, listening, and referral skills. Finally, a Talking Circle was organized for Alaska Natives which focused on the aftermath of the oil spill, for Native culture and subsistence traditions. These programs were implemented in Cordova during the period from January 1996 until February 1997.

Figure 4. Pilot Program Descriptions and Impact Levels

PILOT PROGRAM	DESCRIPTION	STRATEGY	TARGET POPULATION
Community Education Newspaper Series	Nine articles on technological disasters, their impacts and coping skills	Run series in the <u>Cordova Times</u>	Community
Community Education Radio Series	Program on coping skills and Technological Disaster Impacts	Five-part program aired four times in community	Community
Community Education Leaflet Distribution	Coping ; stress response and information about technological disasters	Distributed at locations throughout community. Mailed to residents.	Community
In-service Training Program	Scheduled information on technological disasters presented to key professional groups in community	Delivery of information (3 hour program) to clergy, teachers, and law enforcement personnel	Key community professionals
Helping others peer listener program	Adult volunteers trained and provided materials for support counseling; 13 volunteers completed the program	Solicited volunteers, developed schedule, training updates	Individual Level
Talking Circle	Alaska Native community members participate in grieving cycle focusing on ecological destruction of EVOS.	Organized through traditional facilitators and invitation to community	Alaska Native Community

Documenting the Intervention

Community Education Radio Program. Research suggests that community education strategies are relatively effective for mitigating long-term social impacts of natural disasters and prolonged economic disruption (Jurich and Russell 1987; Solomon *et al.* 1992; Zimmerman and Fetsch 1994). Given these previous evaluations, three community education programs were designed to provide information to Cordova residents. The community education radio program was developed in terms of a series of five (5) 30 minute programs. These original programs were recorded at the University of South Alabama and aired on local radio stations four times from May to December, 1996. A member of the professional staff at Sound Alternatives, a mental health services agency in Cordova, was available to answer questions following the first airing of the radio programs. These programs provided information regarding technological disasters and their consequences. In addition, several programs focused on the development and management of coping skills. The fact that Cordova is an extremely isolated community with one local a.m. radio station made this an important program. The titles of the five programs were:

1. What are technological disasters?
2. Community recovery
3. Depression
4. Anxiety and PTSD
5. Substance abuse and anger

Community Education Leaflets. As a part of the outreach activities of Sound Alternatives and the Cordova Family Resource Center, leaflets were distributed throughout the community. These leaflets provide information on "Managing Anger", "Coping with Uncertainty", "Overcoming Depression", "Talking with Children" and other topics. The leaflets were developed cooperatively by staff from Sound Alternatives, The Cordova Family Resource Center, RCAC, and the University of South Alabama. These leaflets were placed at key locations throughout the community and were mailed to over 200 households. Titles were:

1. Growing Together: A Community Education Program
2. Plain Talk About Domestic Violence and Wife Abuse
3. Plain Talk About Managing Anger
4. Plain Talk About Depression
5. Plain Talk About Post-traumatic Stress Disorder
6. All About Alcohol: Just for Kids
7. Plain Talk About Alcohol
8. Plain Talk about Helping Children Cope with Disaster

Community Education Newspaper Series. One important medium for community education is the local newspaper. Local newspapers in small rural communities are often read by most residents, thereby providing an important opportunity for facilitating community recovery through education. This pilot program involved developing nine (9) original articles which provided information on technological disasters, their impacts and appropriate coping strategies for victims. The articles ran in the Cordova Times over a five month period. The titles of the nine articles were:

"Technological Disasters: Why Are They Different?"
"Three Mile Island: A Continuing Disaster"
"Understanding Anger from Technological Disasters"
"Letting Go of Chronic Depression"
"Chronic Stress and Alcohol Consumption"
"Talking to Children in Stressful Situations"
"The Mood-Food Connection and Stress"
"Chronic Stress and Cancer: Is There a Link?"
"Coping with Technological Disasters"

These newspaper articles paralleled and complemented information provided in the radio programs and educational leaflets.

The Peer Listener Program

Research on rural communities and disaster-effects has shown that many of the people who are affected by disasters are reluctant to use traditional mental health services, particularly when the disaster is man-made. Furthermore, traditional mental health services may not be effective at dealing with the long-term effects of disaster. One of the alternative treatments that has been found to be effective is peer counseling. Peer networks have been established in other communities to help community and individual recovery from long-term economic depression (Cecil 1988).

Peer listeners can also provide a number of services to the community. Through special training in listening skills, anger management, depression, and other family problems, peer listeners have a unique opportunity to assist their family and friends with ongoing concerns. A peer listener may merely serve as an available ear or may assist in problem-solving, or provide referrals to more formal sources of support. Talking with someone who truly knows you and your community can be beneficial in helping an individual feel understood.

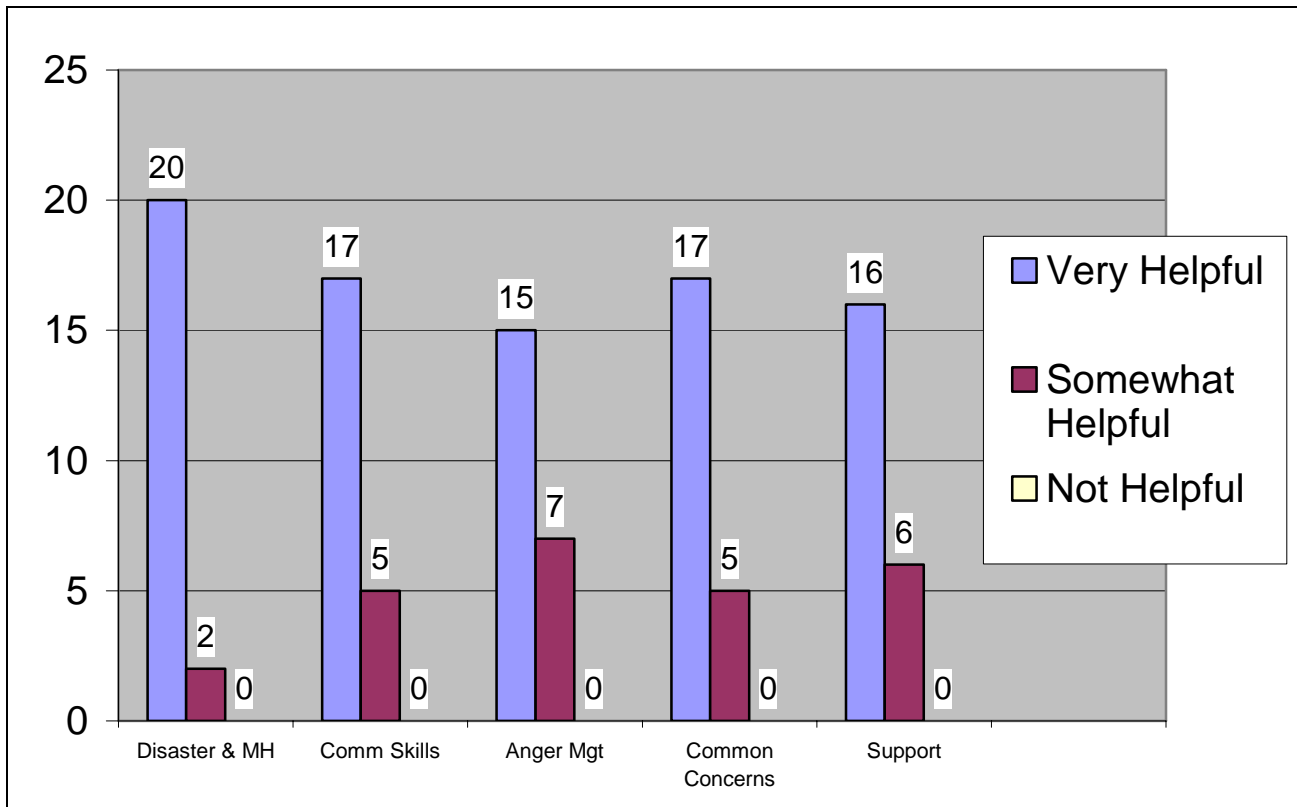
Since peer listeners are members of the community, they are more likely to be trusted and have a greater understanding of the effects of a disaster. In addition, peer listeners know the people in the community who are in need, as well as the community resources which are available. Training local residents in crisis intervention and listening skills provides opportunities for directly responding to the psychological symptoms identified for high-risk groups in the Cordova community.

In other communities, peer listeners have served a number of functions. They may work with local church or community groups as a resource for persons in need. They may also work directly with mental health agencies as additional sources of support. Finally, they may be available informally to family and friends, as someone who will listen and provide some guidance.

The peer listener training program implemented in Cordova was designed to train individuals from high-risk groups, that is, commercial fishermen and Alaska Natives. Through local advertising in the newspaper, shops, and local T.V. scanner, interested individuals were recruited. After screening by a mental health professional, selected listeners participated in a two-day training session conducted in February, 1996. Ongoing supervision and support was provided through local community agencies and program directors. Follow-up contacts occurred approximately four and seven months after the initial training. While intended to deal with the long-term effects of the oil spill, this local support network

will remain in the community as an ongoing resource. In addition, the network will be in place and available should future disasters or other traumatic events occur in the community. Twenty (20) peer listeners were trained and their initial evaluation of the program was very positive (see Figure 5). Thirteen (13) peer listeners completed the twelve (12) month program.

Figure 5. Peer Listener Training Evaluation, February 1996.



In-Service Training

A program of in-service education was developed for special groups in the community. Teachers, law enforcement personnel and members of the clergy were targeted because of their numerous contacts with families and individuals. In-service training programs for these groups were two-hour presentations that addressed topics such as "What are technological disasters?"; "The symptoms of chronic stress"; "Responding to depression" and "Alcohol abuse"; etc. These in-service training programs were presented in February of 1996 to teachers, law enforcement staff and clergy. A total of 41 people participated in this activity.

The Talking Circle

A program designed to involve the local Alaska Native community was developed in terms of traditional Native customs. Talking Circles have been identified as an important activity for the revitalization of Alaska Native Culture (Napoleon, 1991: 27-30). The Talking Circle is not "a place for debate or argument, but a place to share oneself and one's experiences, feelings and thoughts with the rest of the village" (Napoleon, 1991:28). This Talking Circle was organized by the Village of Eyak and involved a number of spiritual leaders and facilitators.

The event lasted for two days and was a cooperative effort between the Alaska Council on Prevention of Alcoholism and Drug Abuse, local mental health organizations, the Southcentral Foundation and the pilot program. The Talking Circle was about the *Exxon Valdez* disaster, although in testimony other personal problems were detailed. The circle began and ended with healing ceremonies on the shore of Prince William Sound (Orca Inlet). The ceremonies focused on the birds, fish and animals, that had been annihilated by the spill. In the first ceremony, a group of sea otters were told of the sorrow felt by everyone for the senseless destruction resulting from the spill. Alutiiq language was spoken and a spiritual leader presided. The second ceremony involved all participants and combined the sorrow from the spill with the healing of personal grief. The ceremony involved burning cedar and sage and once again was directed by a spiritual leader. These activities were held in late January of 1996.

Participants in this event included local Alaska Natives, the Northern Lights Drummers, elders from the villages of Tatitlek and Chenega Bay and spiritual leaders from Port Graham, Fairbanks and Oklahoma. The Talking Circle ended with Alaska Native dances and a potlatch. A total of 86 individuals attended the Talking Circle.

Evaluation Research Design

Although the execution of an ideal evaluation research design was not possible in the present case, since much of the outcome data for the impact and control communities could not be collected on a community wide basis immediately prior to the intervention, an approximation to such a design was executed. The quasi-experimental design developed for the Cordova intervention involved two communities (one impact: Cordova, and one control: Petersburg); pre and post treatment measures in both of these communities on selected outcomes; pre and post-test measures for commercial fishermen on selected measures; and post-test only measures in both communities for other outcomes. This design allows for a direct quantitative evaluation of the objectives of the intervention.

Data were available from Cordova and Petersburg (control community) for outcome variables over the years 1989 to 1992. The outcome variables included intrusive stress, avoidance behavior, and global distress (summation of intrusive and avoidance scores).

Two surveys were administered to a sample of people in Cordova's commercial fishing industry. In the fall of 1995, a mail survey of this sample was conducted in which 125 individuals responded (28% response rate, see: Picou and Arata 1997). Included in the 1995 survey were various measures of psychological stress which provided information for programmatic development as well as a baseline data from which to examine changes after the intervention programs were initiated. After the program had been implemented, during the spring of 1997, a survey was mailed to the 125 respondents of the 1995 mail survey. A total of 89 surveys (71.2%) were returned but analysis indicated that 5 surveys (4%) had been filled out by a spouse. Thus, a total of 84 usable surveys (67.2%) were included in this analysis. It should be noted that five surveys were undeliverable. This yields an adjusted response rate of 70 percent. Table 3 indicates the outcomes of the mailed surveys.

Fifty-six (44.8%) of the total sample were members of the Cordova District Fishermen United (CDFU) in 1997. The response rate for CDFU members was 71.4% (n=40). In terms of residence, 61 of the respondents (72.6%) had current Cordova addresses and 23 (27.4%) did not. About one-half of the latter group resided in other Alaskan communities (e.g., Valdez, Homer, Wasilla, Palmer, Girdwood, Anchorage) and the other half resided in the Lower 48 (particularly in the Pacific Northwest). Eleven of the Non-Cordova respondents were also residents of Cordova during 1989.

Table 3. Disposition of Surveys Mailed to Commercial Fishermen Sample, 1997

	Frequency	Percent
Completed	84	67.2
Spouse Completed	5	4.0
Refused	3	2.4
Return to Sender	4	3.2
Deceased	1	0.8
Did Not Return	28	22.4
TOTAL n and Percent	125	100.0

A post intervention community survey was implemented in Cordova (n=200) and Petersburg (n=200) in 1997. This telephone survey measured many common variables from the earlier surveys and included information on awareness and participation in program activities, help seeking behaviors, personal relationship evaluations, personal health accounts and knowledge of disaster information. The same survey items were used in the 1997 commercial fishing survey. Data for the 1997 community surveys were collected using random digit dialing procedures, and interviews were conducted by the University of South Alabama Polling Center. For the Cordova sample, 142 (41% of total contacts) potential respondents refused to participate. In Petersburg, 289 (59% of total contacts) declined participation.

The general logic of our evaluation design, then, is the following: (1) Comparisons are to be made among fishermen in Cordova, pre and post implementation: If programs are effective, then scores on outcome variables should be better in 1997 than in 1995. (2) Comparisons between Cordova and Petersburg in 1997 and 1989-1992: if programs are effective, differences between Cordova and Petersburg on outcomes should be less in 1997 than was true in earlier surveys.

Table 4 presents a more detailed description of the outcome data collected and analyzed in this research design. The outcome variables include intrusive stress, avoidance behavior, global stress, depression, help seeking behavior, quality of personal relationships, and perceived health. Table 4 identifies the samples and years of data collection for which data are available for each outcome variable.

Table 4 Research Design for Evaluation for the Growing Together Project, Cordova, Alaska

OUTCOME VARIABLES							
Samples	Intrusive Stress	Avoidance Behavior	Global Stress	Depression	Help Seeking Behavior	Quality Social Relationships	Perceived Health
Cordova Total Sample							
1989	X	X	X				
1990	X	X	X				
1991	X	X	X				
1992	X	X	X				
1997	X	X	X	X	X	X	X
Petersburg Total Sample							
1989	X	X	X				
1990	X	X	X				
1991	X	X	X				
1992	X	X	X				
1997	X	X	X	X	X	X	X
Cordova Commercial Fishers							
1989	X	X	X				
1990	X	X	X				
1991	X	X	X				
1992	X	X	X				
1995	X	X	X	X	X	X	X
Mail 1997	X	X	X	X	X	X	X
Phone 1997	X	X	X	X	X	X	X
Petersburg Commercial Fishers							
1989	X	X	X				
1990	X	X	X				
1991	X	X	X				
1992	X	X	X				
1997	X	X	X	X	X	X	X

Sample Characteristics: 1997 Surveys

Community Surveys. Table 5 presents the demographic characteristics of the Cordova and Petersburg samples obtained from the 1997 community wide surveys. The two communities were found to be very similar on most variables. No significant differences were found for the following variables: percentage of fishing households (with at least one adult employed in fishing), percentage of fishing respondents, gender, race, and educational attainment of respondents. Small but significant differences were found for marital status (fewer adults married in Cordova) and age (Cordovan respondents about 1.5 years younger than those for Petersburg). Comparisons on demographic characteristics for the two samples suggest that Cordova and Petersburg were very similar communities at the time of the survey. Petersburg is an appropriate control community given the modest differences observed for the samples.

Table 5. Demographic Characteristics, 1997 Cordova and Control Community Samples (Percentages, Means, and Medians)

Characteristic	Cordova (n=200)	Petersburg (n=200)	Statistical Significance
% Male	49.5	53.5	ns
% Fishing Households	42.0	44.0	ns
% Respondents Fishermen	23.0	22.5	ns
% White	86.0	86.0	ns
% Alaskan Native	6.5	4.5	ns
% Married	63.0	74.5	.04
% Never Married	20.5	14.5	.04
% Divorced/Separated	13.0	6.5	.04
% Some College	71.0	70.5	ns
Mean Age	42.3	44.9	.05
% Resident during March 1989 (Exxon Valdez spill)	66.5	-	-
Median Years Lived in Cordova	15.5	-	-

n.s. = not significant

Fishermen Surveys. Demographic data for the commercial fishermen survey were described and further analyzed according to current place of residence (coded as 0 = Non-Cordova; 1 = Cordova). The results are summarized in Table 6. There were few significant differences between the two groups. In general, both groups were predominately white, married, and male, with commercial fishing occupations and residing in households that contained other commercial fishermen. The average age was a little over 49 years. There were virtually no differences in the demographic characteristics of commercial fishermen who resided in and outside the Cordova community.

Table 6. Demographic Characteristics of Cordova and Non-Cordova Samples, 1997 Fishermen Survey (Percentages, Means, and Medians)

Characteristic	Cordova (n=61)	Non-Cordova (n=23)	Significance (Chi-Square)
% Male	90.2	87.0	ns
% Fishing Households	93.4	95.7	ns
% Commercial Fisherman	88.5	87.0	ns
% White	90.2	95.7	ns
% Alaska Native	6.6	4.3	ns
% Married	72.1	73.9	ns
% Never Married	13.1	13.0	ns
% Divorced/Separated	13.1	13.0	ns
% Some College	41.0	26.1	ns
Mean Age	49.5	49.8	ns
% Cordova Resident in 1989	90.2	52.2	.000
Median Years Lived in Cordova	26.0	----	----

Measuring the Scope of the Intervention

Table 7 presents comparisons between the 1997 community wide samples concerning awareness of the programs implemented during the mental health mitigation project. Previous research has shown that when respondents are asked if they are aware of a certain program, a percentage will answer in the affirmative, even when no such program exists. To control for this overestimate of program awareness, identical questions were asked in both communities, although the intervention only occurred in Cordova. When significantly more respondents from Cordova report awareness of programs, then we may conclude that a significant proportion of Cordovans were, in fact, aware of the programs. As can be seen in Table 7, every program showed greater reported awareness in the Cordova sample. Between 25% and 33% of Cordova respondents were aware of the specific projects of the mitigation project: Peer Listeners, the Alaska Native Talking Circle, and the Growing Together Program. More than 4 of 5 respondents were aware of the agencies associated with program activities: Prince William Sound RCAC, Sound Alternatives, and the Cordova Family Resource Center. These results suggest that the program was successfully implemented in the Cordova community.

Table 7. Awareness of Intervention and Other Community Programs in Cordova and Control Community (Percentages) 1997 Community Surveys

Program	Awareness		Statistical Significance Level
	Cordova (n=200)	Petersburg (n=200)	
Peer Listeners	30.0	8.5	<.0005
Talking Circle (1/96)	25.5	6.5	<.0005
Growing Together Community Education	33.5	10.0	<.0005
Prince William Sound Regional Citizens' Advisory Council	86.0	31.5	<.0005
Sound Alternatives	89.5	8.5	<.0005
Cordova Family Resource Center	96.0	36.0	<.0005

Program awareness among commercial fishermen is shown in Table 8. In a manner similar to the larger community, over 90 percent of the commercial fishermen in Cordova were aware of Sound Alternatives, the Cordova Family Resource Center and the Prince William Sound Regional Citizens' Advisory Council. About one-fourth of the respondents in Cordova were aware of the Growing Together Community Education Program, the Peer Listener Program and the Talking Circle. There were significant differences between the Cordova and Non-Cordova samples for all variables except awareness of the Talking Circle and the Prince William Sound Regional Citizens' Advisory Council. These results confirm that by being a resident of Cordova, awareness of the community education program was significantly enhanced. The statistical analysis for the Cordova community and for commercial fishermen, indicate that the Growing Together Program was relatively successful in its implementation, given that it was known and is visible in both the impact-community and for an occupational group known to be at-risk for chronic social and psychological impacts, i.e., commercial fishermen.

Table 8. Awareness of Intervention and Other Community Programs in Cordova and Non-Cordova Samples, 1997 Fishermen Survey (Percentages)

Program	Cordova (n=61)	Non-Cordova (n=23)	Significance* (Chi-Square)
Sound Alternatives	90.2	26.1	.000
Cordova Family Resource Center	90.2	56.5	.000
Growing Together Community Education	23.3	4.5	.026
Peer Listener Program	23.0	4.3	.024
Talking Circle	23.3	8.7	.065
Price William Sound Regional Citizens' Advisory Council	93.4	95.7	ns

* Chi-Square significance level for one-tailed test

Participation in Programs

Tables 9 and 10 present comparisons between the Cordova and Petersburg samples regarding respondents reported participation in specific pilot programs of the intervention. As before, each of these programs were available only in the impact community of Cordova, and thus participation was impossible for the Petersburg respondents. The logic for this comparison is that such contrasts help to control for over reporting. The vast majority of the program activities show greater participation in the impact community. Each of the following participation estimates were significantly greater in Cordova than in Petersburg. Nearly two thirds of Cordova respondents reported that they had read at least one newspaper article on technological disasters. The mean number of articles read was twice as high as that reported for the Petersburg sample (see Table 10). About 4 of 10 Cordova respondents reported that the articles were very informative. Another 3 in 10 Cordova respondents reported that they had received materials in the mail about recovery from technological disasters, about 1 in 4 had listened to one of the radio programs, and 2 in 10 registered at the 1996 Iceworm Festival for the drawing. Another 1 in 6 Cordovans reported that they had picked up materials on stress and coping at the Iceworm Festival. About 1 in 10 indicated that they knew a Peer Listener. Several differences were not significantly different between the two samples. Approximately 3 in 10 Cordovans reported that they had picked up a leaflet on stress and coping, and 1 in 20 reported that they had spoken to a Peer Listener. These results provide empirical support that significant program participation occurred in Cordova, providing further support for the objective of community involvement in program activities.

Table 9. Participation in Intervention Programs, Cordova and Control Community (Percentages)

Type of Participation	Cordova (n=200)	Petersburg (n=200)	Statistical Significance Level
Do you know a Peer Listener?	11.5	3.0	< .0005
Spoken to Peer Listener about personal or community issues?	5.0	4.0	ns
Received or picked up leaflets about coping or stress?	30.5	24.0	ns
Read articles on technological disasters in newspaper?	60.5	28.5	<.0005
Articles very informative?	42.1 ¹	23.7 ²	< .0010
Listened to radio shows on technological disasters?	26.5	16.5	< .0100
Shows very informative?	43.4 ³	41.2 ⁴	ns
Register for Shaq shoe drawing?	22.0	1.5	<.0005
Collect materials at festival?	15.5	2.0	<.0005
Receive information in mail about recovery from technological disasters?	30.5	7.0	<.0005

¹ n=121

² n=59

³ n=53

⁴ n=34

Table 10. Mean Number of Articles Read, Programs Heard for Cordova and Petersburg

Media Type	Means		Statistical Significance Level
	Cordova (n=200)	Petersburg (n=200)	
# of newspaper articles read	3.9	1.8	<.0005
# of radio programs heard	1.0	0.8	ns

Estimates of participation by commercial fishermen in the various community intervention programs are presented in Tables 11 and 12. Once again the findings for commercial fishermen are similar to the community at large. Approximately 60 percent indicated that they read the newspaper series on technological disasters published in the Cordova Times. Over one-half of the entire sample (60% in Cordova and 40% in the Non-Cordova sample) reported reading at least one article in the seven-part series. Respondents from the Cordova sample were significantly more likely to have read an article than were respondents from the Non-Cordova sample ($p=.044$ one-tailed test). In terms of the number of articles read, the mean in Cordova was 3.03 compared to 2.63 in the Non-Cordova sample. Four respondents from Cordova reported reading all seven articles.

The mailing of information about recovery from technological disasters was the second most common form of participation for the commercial fishermen (43.3%). There was a significant difference between the two sample groups for this variable. The other programs generally had less than 25 percent of the Cordova sample of commercial fishermen participating.

These results suggest that program intervention was facilitated by the newspaper articles. This component of the pilot program reached the majority (60%) of community residents and commercial fishermen in the impact community. The distribution of educational materials (leaflets) at key locations in the community and directly through the mail seemed to reach almost 1 out of every 3 Cordovans as well as commercial fishermen. Commercial fishermen did find the articles and radio programs as informative as the general community, suggesting similar consequences for this high-risk group for these two program components.

Knowledge of Psychological Distress and Technological Disaster Impacts

Table 13 presents respondents' answers to a series of questions testing knowledge about technological disasters and the coping with the distress that often follows them. Respondents from Cordova and Petersburg were asked the same questions. The purpose of these questions was to see to what extent the community education program resulted in greater learning about technological disasters among the targeted population than in the control community. Performance on this test did not differ between the two groups except for one item: "When hit by technological disaster, people are as likely to come together (as when hit by a natural disaster)". On this question, more than twice as many Cordova respondents gave the right answer than those from Petersburg.

Table 11. Participation in Intervention and Other Community Programs in Cordova and Non-Cordova Samples (Percentages), 1997 Fishermen Survey

Type of Participation	Cordova (n=61)	Non-Cordova (n=23)	Significance*
Do you know a Peer Listener?	14.8	0.0	.047
Spoken to Peer Listener about personal or community issues?	8.5	0.0	ns
Received or picked up leaflets about coping or stress?	26.7	34.8	ns
Read newspaper articles on technological disasters?	60.0	39.1	.072
Articles very informative? (n=43)	37.1	25.0	ns
Listened to radio broadcasts on technological disasters?	25.0	17.4	ns
Broadcasts very informative? (n=19)	40.0	25.0	ns
Registered for Shaq shoe at the Iceworm festival?	20.0	0.0	.014
Collected materials at festival?	6.7	0.0	ns
Received information in mail about recovery from technological disasters?	43.3	17.4	.023

* Fishers Exact Test; Significance level for one-tailed test.

Table 12. Mean Number of Articles Read and Radio Broadcasts Heard by Cordova and Non-Cordova Samples, 1997 Fishermen Survey

Media Type	Cordova	Non-Cordova	Significance (T-test)
# Newspaper articles read	3.03 (n=35)	2.63 (n=8)	.068
# Radio broadcasts heard	2.20 (n=15)	2.25 (n=4)	ns

Table 13. Results of Disaster Knowledge Quiz of Cordova and Petersburg Samples (Percentage with Right Answers), 1997 Community

Question	Cordova (n=200)	Petersburg (n=200)	Significance (Chi-Square)
1. Anger is a normal and healthy response to a technological disaster. (True)	78.0	79.5	ns
2. When angry, its better to avoid talking to family and friends. (False)	76.0	78.5	ns
3. People tend to come together after a natural disaster. (True)	95.5	98.0	ns
4. When hit by a technological disaster, people are as likely to come together as when hit by a natural disaster. (False)	34.0	14.5	<.0005
5. Depression is a common response by individuals experiencing a technological disaster. (True)	89.0	87.5	ns
6. Spending time alone is a good way to cope with depression. (False)	69.0	75.0	ns
7. After a technological disaster, parents should try to keep family problems hidden from their children. (False)	78.5	84.0	ns
8. Heart attacks or strokes are associated with being angry or anxious. (True)	89.0	88.5	ns
9. Depression and stress can weaken the immune system and can be associated with cancer. (True)	72.0	75.0	ns
10. Reaching out and helping others is a good way to deal with depression. (True)	84.5	86.0	ns
11. Which town has more trouble recovering from a disaster a) hit from a storm b) hit by a chemical spill or c) both? (b)	80.5	79.5	ns

Results for the fishermen survey on this quiz are shown in Table 14. In general, both sample groups displayed accurate knowledge about the effects of psychological stress and technological disaster impacts. Among the Cordova sample, over 90% correctly answered seven of the 11 items and over 80% correctly answered three of the items. Only 63 percent of the Cordova sample correctly answered item 4 (When hit by a technological disaster, people are as likely to come together as when hit by a natural disaster).

There were significant differences between the two sample groups for only two variables (2 and 10). Both of these variables concerned coping with psychological issues such as anger and depression. In both cases, the Cordova sample was significantly more likely to know the correct answer than the Non-Cordova sample. These findings provide very modest evidence of an "education impact" in the

Cordova community resulting from the Growing Together program. Nonetheless, this interpretation should be viewed with caution given measurement issues associated with determining programmatic educational outcomes at the community level.

Measuring Outcomes of the Intervention: Psychological Distress

The ultimate outcome variables targeted for the community education intervention program concern psychological stress. Research by the Picou team, and others, has demonstrated that the 1989 *Exxon Valdez* Oil Spill produced chronic impacts on the psychological health and well-being of Cordova residents (Picou et al 1992; Palinkas et al 1993; Picou and Gill 1996; Picou and Arata 1997). Three measures of stress are available for both community samples from 1989-1997: intrusive stress, avoidance behavior, and global stress, each of which is measured by the Impact of Events Scale (Horowitz 1976; Horowitz et al 1979; Picou and Arata 1997).

Table 15 summarizes much of the data from community wide surveys for the years 1989 to 1997. First, note the pattern of results prior to the implementation of the mitigation project, for the period 1989-1992. All three measures of distress reported in this table were significantly higher among Cordova residents than in the control population from the time of the spill through 1992. Intrusive stress levels showed declines for both communities over the time period, while avoidance behavior declined for Cordova till 1991, after which it increased slightly.

Table 14. Results of Disaster Knowledge Quiz of Cordova and Non-Cordova Samples (Percentage with Right Answers), 1997 Fishermen Survey

Question	Cordova (n=61)	Non-Cordova (n=23)	Significance (Chi-Square)
1. Anger is a normal and healthy response to a technological disaster. (True)	91.5	82.6	ns
2. When angry, its better to avoid talking to family and friends. (False)	91.7	65.2	.003
3. People tend to come together after a natural disaster. (True)	96.6	91.3	ns
4. When hit by a technological disaster, people are as likely to come together as when hit by a natural disaster. (False)	63.3	69.6	ns
5. Depression is a common response by individuals experiencing a technological disaster. (True)	95.0	100.0	ns
6. Spending time alone is a good way to cope with depression. (False)	81.0	90.9	ns
7. After a technological disaster, parents should try to keep family problems hidden from their children. (False)	86.4	77.3	ns
8. Heart attacks or strokes are associated with being angry or anxious. (True)	93.3	95.7	ns
9. Depression and stress can weaken the immune system and can be associated with cancer. (True)	93.2	95.7	ns
10. Reaching out and helping others is a good way to deal with depression. (True)	98.3	76.2	.001
11. Which town has more trouble recovering from a disaster a) hit from a storm b) hit by a chemical spill or c) both? (b)	85.0	86.4	ns

Table 15. Event-Related Psychological Stress Outcomes (Means), Cordova and Petersburg, 1989-97

	Intrusive Stress		Avoidance Behavior		Global Stress		n	
	<u>C</u>	<u>P</u>	<u>C</u>	<u>P</u>	<u>C</u>	<u>P</u>	<u>C</u>	<u>P</u>
1989	16.5	11.1	11.1	5.0	27.6	16.1	117	73
1990	10.1	3.7	9.6	1.5	19.7	5.2	68	53
1991	9.4	2.4	7.3	1.5	16.7	3.9	221	102
1992	8.5	2.8	8.1	2.1	16.6	4.9	151	59
1997	7.1	3.1***	6.2	3.4***	13.3	6.5	200	200

*p < .05 ** p < .01 *** p < .005

Next, we examined the post intervention measures of these variables in Table 16. A major objective of the mitigation project was to facilitate further declines in psychological distress for Cordova, and to reduce the difference in distress between the targeted population and that of the comparison community. The findings revealed that intrusive stress and avoidance behavior did decline from 1992 to 1997 for Cordova, and that the difference between the two communities also was reduced. Nonetheless, the 1997 data show that stress levels in Cordova remained significantly higher than those for Petersburg for both measures. These results suggest that the mitigation project may have facilitated improvement, but did not completely eliminate the elevated chronic event-related stress levels manifested by Cordova residents. Nonetheless, event-related stress levels declined in Cordova following program intervention.

Table 16. 1997 Event-Related Psychological Stress Outcomes, Long Term Cordova Residents vs. Total Petersburg Sample

Intrusive Stress		Avoidance Behavior		Global Stress	
Cordova	Petersburg	Cordova	Petersburg	Cordova	Petersburg
8.2	3.1***	7.8	3.4***	16.0	6.7***

*** p < .001
Cordova: n=133; Petersburg: n =200

Table 16 presents a comparison of distress levels for long-term Cordova residents, those present at the time of the 1989 spill, with that of the Petersburg total sample. The logic here is that long-term residents should be at greatest risk for chronic impacts. Findings presented in Table 16 confirm this hypothesis. Intrusive stress, avoidance behavior and global stress were higher among long term residents of Cordova in comparison to other Cordova residents, and those of Petersburg. These calculations suggest that program impacts for reducing event-related stress have been less effective for long-term residents.

Table 17. 1997 Mean Depression Scores, Cordova (Total Sample, Long Term Residents) and Petersburg (Total Sample)

Cordova (Total Sample) (n= 200)	Cordova (Long Term Residents) (n=133)	Petersburg (Total Sample) (n=200)
6.5***	6.8***	5.0

*** p < .001 (Each Cordova sample compared to the Petersburg sample).

Community wide data on depression were collected for the first time in 1997, and so no pre-intervention, post-intervention comparisons are possible on this variable. Table 17 shows that Cordova residents reported significantly greater symptoms than those from Petersburg in the 1997 survey.

Table 18. Psychological Stress Outcomes (Means), Commercial Fishermen, Cordova 1989-97

	Intrusive Stress	Avoidance Behavior	Global Stress	n
1989	19.3	12.1	31.4	49
1990	10.1	9.7	19.8	27
1991	13.1	10.1	23.2	73
1992	11.8	11.4	23.2	48
1995 (Mail)	13.2	13.1	26.3	88
1997 (Mail)	14.7	11.3	26.0	63
1997 (Phone)	11.7	9.4	24.0	46

Table 18 presents trends in psychological stress among commercial fishermen working and/or resident in Cordova from 1989 to 1997. Commercial fishermen are, of course, a group at elevated risk for suffering negative psychological impacts of the oil spill. These data show that stress remains high among this group, with little change evident from 1992 to 1997. Table 20 presents Cordova and Petersburg comparisons in 1997 levels of stress for commercial fishermen. These data indicate that chronic stress remains substantial among the fishermen of Cordova, significantly higher than among those of Petersburg. The findings from Tables 18 and 19, then, suggest that the mitigation effort does not seem to have appreciable success at reducing stress among fishermen at the aggregate level.

Table 19. Cordova, Petersburg Comparisons for Event-Related Psychological Stress Reported by Commercial Fishermen, 1997 Community Survey

Intrusive Stress		Avoidance Behavior		Global Stress		Depression		n	
C	P	C	P	C	P	C	P	C	P
11.7	3.3***	9.4	2.5***	21.3	5.8***	6.7	4.2*	46	45

* p < .05

*** p < .001

To further test for more detailed effects of the intervention on commercial fishermen, T-Tests were calculated for the 1997 fishermen survey data. Differences in stress outcomes between fishermen exposed to the intervention, those living in Cordova in 1997, were compared to fishermen living elsewhere. The results are presented in Table 20. There were no significant differences between the two samples. These findings suggest that event-related stress and depression remain just as high among exposed fishermen as among non-exposed indicating a lack of positive intervention impact for this group at least as measured at the aggregate level.

Table 20. Psychological Stress Scale Means and T-Test Significance for Cordova and Non-Cordova Samples, 1997 Fishermen Survey

Measure	Cordova	Non-Cordova	Significance
Depression	11.13	12.17	ns
Intrusion	12.89	13.22	ns
Avoidance	10.90	12.65	ns
Global	23.79	25.87	ns

Help Seeking Behavior, Quality of Personal Relationships, and Health Perceptions

One of the objectives of the mental health mitigation program was to increase help seeking behavior among individuals experiencing chronic distress. Such help seeking may be formal, e.g. seeking care from a counselor or physician or it may be informal, e.g. help provided by family or friends. Table 21 presents findings on informal help seeking among Cordova and Petersburg respondents. Cordova respondents were slightly more likely to report such behavior than those from Petersburg. Fifteen percent of Cordovans, versus 24 percent of Petersburg residents, said they never talked about problems with friends and relatives. Similarly, about 35 percent of respondents from Cordova, versus 43 percent of those from Petersburg, reported that they never asked others for help. The last two rows of Table 23 present findings on formal help seeking behavior. Slightly more Cordovan respondents (15%) than those from Petersburg (11%) report having visited a counselor for personal or family problems. Because pre-intervention data on these measures are not available, we can not determine with certainty that the intervention caused the higher levels of help seeking in Cordova. However, it should be noted that these differences were in the predicted direction and are consistent with successful program intervention.

Table 21. Informal Help Seeking Behavior for Cordova and Petersburg Samples (Percentages)

Item	Cordova (n=200)	Petersburg (n=200)	Significance (Chi-Square)
In the past I have talked with friends and relatives about my problems			p=.08
Not at all	15.4	24.4	
Rarely	23.1	19.3	
Sometimes	32.8	30.5	
Often	28.7	25.9	
In the past year I found myself asking for help			p=.04
Not at all			
Rarely	35.0	43.4	
Sometimes	39.6	27.6	
Often	18.8	20.9	
	6.6	8.2	

Table 22. Personal Relationships for Cordova and Petersburg Samples (Percentages)

Item	Cordova (n=200)	Petersburg (n=200)	Significance (Mann-Whitney)
In the past year my personal relationships with relatives have			ns
Improved	30.8	27.2	
Remained the same	63.1	68.7	
Suffered but not ended	4.1	3.1	
Ended	2.1	1.0	
In the past year my personal relationships with non-relatives have			ns
Improved	27.1	24.0	
Remained the Same	67.2	73.0	
Suffered but not ended	5.2	2.0	
Ended	0.5	1.0	

Table 22 presents data on the changing quality of personal relationships for the two samples. Respondents were asked how relationships with family and with non-relatives had changed over the past year. Given the elevated stress manifested in Cordova, one would normally expect a greater number of relationship problems there than in Petersburg. On the other hand, if the intervention was successful, one would expect reductions in these problems in the target community. Table 22 reveals that no significant difference was found between the two groups. This finding is consistent with an effective intervention, but once again the absence of pre-intervention data prevents a certain conclusion.

Table 23. Reported Health Problems and Help Seeking for Cordova and Petersburg Samples (Percentages)

Item	Cordova (n=200)	Petersburg (n=200)	Petersburg (chi-square)
Concerning your physical health, within the past year, do perceive yourself has having:			ns
More health problems	22.4	16.3	
The same amount	57.8	65.3	
Less health problems	19.8	18.4	
Concerning your emotional health, within the past year, do perceive yourself has having:			p=.001
More health problems	19.9	8.3	
The same amount	59.7	64.1	
Less health problems	20.4	27.6	
In the past year have you or anyone in your family seen a counselor for personal or family troubles?			p=.08
Yes	15.2	10.6	
No	84.8	89.4	
In the past year have you or anyone in your family seen a counselor for alcohol or chemical dependency problems?			ns
Yes	8.1	9.0	
No	91.9	91.0	

*One- tail test of significance

Table 23 also reports findings on the changing perceptions of physical and emotional health for the two samples. No difference was observed for perceived physical health, but Cordova respondents were more likely to perceive declines in emotional health over the last year. This finding is consistent with elevated levels of stress and depression described earlier in this report for the residents of Cordova. This finding is consistent with the conclusion, that while the intervention may have produced some amelioration of symptoms in the community, levels of impairment remain high in Cordova.

Results from the 1997 fishermen survey concerning personal relationships and individual health problems are presented in Tables 24 and Table 25. There were few significant differences between the two sample groups. About six out of ten respondents from both groups reported talking to friends and family about personal problems sometimes or often. In both groups, relationships with relatives and non-relatives tended to remain the same. In terms of significant differences between the two groups, the Non-Cordova sample was significantly more likely to report that their personal relationships with relatives had improved and the Cordova sample expressed significantly more physical health and emotional health problems. However, when compared to the community (Cordova) as a whole, proportionately more commercial fishermen reported personal relationship problems, as well as more emotional and health problems.

Table 24. Individual and Physical Relations for Cordova and Non-Cordova Samples (Percentages), 1997 Fishermen Survey

Item	Cordova (n=61)	Non-Cordova (n=23)	Significance (Mann-Whitney)
In the past year I have talked with friends and relatives about my problems			ns
Not at all	13.6	19.0	
Rarely	27.1	23.8	
Sometimes	49.6	57.1	
Often	10.2	0.0	
In the past year I found myself asking for help	25.0	33.3	ns
Not at all	41.7	47.6	
Rarely	30.0	19.0	
Sometimes	3.3	0.0	
Often			
In the past year my personal relationships with relatives have			.071
Improved	10.0	28.6	
Remained the Same	73.3	57.1	
Suffered but not ended	16.7	14.3	
Ended	0.0	0.0	
In the past year my personal relationships with non-relatives have			ns
Improved	10.0	23.8	
Remained the Same	71.7	57.1	
Suffered but not ended	18.3	9.5	
Ended	0.0	9.5	

* One-tail test of significance

Table 25. Reported Individual Physical and Mental Health Problems for Cordova and Non-Cordova Samples (Percentages), 1997 Fishermen Survey

Item	Cordova (n=61)	Non-Cordova (n=23)	Significance* (Chi-Square)
Concerning your <u>physical health</u> , within the past year, do perceive yourself has having:			p=.0990
More health problems	31.1	47.6	
The same amount	60.7	14.3	
Less health problems	8.2	38.1	
Concerning your <u>emotional health</u> , within the past year, do perceive yourself has having:			p= .0815
More health problems	29.5	9.5	
The same amount	61.0	76.2	
Less health problems	14.6	14.3	
In the past year have you or anyone in your family seen a counselor for personal or family troubles?			ns
Yes	16.4	14.3	
No	83.6	85.7	
In the past year have you or anyone in your family seen a counselor for alcohol or chemical dependency problems?			ns
Yes	4.9	4.8	
No	95.1	95.2	

* One-tail test of significance

Relationships Between Intervention Participation and Outcomes

The remaining tables test if the participants in intervention programs, in comparison to non-participants, have greater or lower scores on various outcome measures, including help seeking behavior, social relationships, perceived changes in health, and psychological stress. Two outcomes are possible. If the intervention was completely successful (in the ideal scenario), we would expect program participants to exhibit greater help seeking behavior, but no difference on other outcome measures. Alternatively, and more realistically, program participants may be expected to demonstrate elevated levels of distress, and generally poorer perceived health and social relationships if the programs were serving the appropriate target populations. In other words, if program objectives were effectively implemented, we would expect the most troubled individuals in the population to be attracted by and to participate in intervention programs. As seen below, this latter outcome was the more common finding.

Results for Tables 26 through 29 report data for only the Cordova sample from the 1997 community surveys. Table 26 presents results of cross-tabulations between awareness of various programs and the following outcome variables: informal help seeking, changes in social relationships, and perceived health. Respondents who had heard of Sound Alternatives reported greater declines in relationships with non-relatives, and more declines in physical health. Those who knew of the Cordova

Family Resource Center also had greater declines in physical health, and were more likely to have talked with relatives about their problems. Those who knew of the Growing Together program were more likely to talk to relatives about problems, and were more likely to have seen improvements in relationships with relatives. Those who knew about the Peer Listener program were more likely to talk with relatives, to have asked others for help, and to have experienced improvements in emotional health. Those aware of the Talking Circle reported greater deterioration in relationships with non-relatives, and greater declines in physical health. Finally, those knowledgeable of Prince William Sound RCAC reported declines in relationship with relatives, and declines in emotional health.

Table 27 presents results of cross-tabulations between various types of participation and the same outcome variables. Residents who had received leaflets about stress or coping were more likely to have talked with relatives, and to have experienced declines in emotional health. Those who had spoken to a peer listener, or who had read newspaper articles concerning disasters, were more likely to have spoken to relatives about problems and to have asked others for help. Those who had read the articles were also more likely to report declines in physical health. Those who listened to radio broadcasts reported greater improvements in relations with relatives. Those who registered for the Shaq shoe drawing, were more likely to have spoken to relatives, asked for help, and experienced declines in physical and emotional health. Those who collected materials at the Iceworm Festival reported more talk with relatives, and more requests for help. Finally those who received materials in the mail on technological disasters were more likely to talk with relatives, had experienced greater declines in relations with non-relatives, and perceived more declines in physical health. In general, these findings reveal that program participation resulted in people talking to relatives about problems and asking others for help.

Table 28 reports tests of differences in mean scores for each measure of psychological distress by awareness of intervention programs. Those who were aware of the peer listener program had greater depression scores than those not aware. Those aware of the Talking Circle had more symptoms of depression and intrusive stress. Finally those aware of Prince William Sound RCAC reported greater depression, intrusive stress, and global stress. These results support the program objective of reaching community residents characterized by psychological problems.

Table 29 reports differences in psychological distress among those who participate, and those who did not, in intervention programs. Those who spoke to a Peer Listener reported fewer depression symptoms, but more of intrusive stress, than those who had not. Those who had read articles reported greater intrusive stress. Those who had listened to radio broadcasts had significantly higher levels of distress on all measures. Those who registered for the shoe drawing, or who had collected materials at the Iceworm Festival, had higher levels of intrusive stress, avoidance behavior and global stress. Finally, those who had received program materials in the mail reported more depressive symptoms. Once again, these results reveal that participation in various program activities did involve local residents with high levels of depression and event-related psychological stress. Community residents most in need of program materials and information were more involved in the program than other residents.

The remaining tables present results from similar analyses using data from the 1997 fishermen's survey. These analyses were conducted only for the Cordova sample of fishermen. The first analysis presents findings on the relationship between awareness of community intervention programs and social relationships. Mann-Whitney U tests were conducted to test for statistically significant differences. The results are presented in Tables 30 and 31.

Table 26. Mann-Whitney Test Significance Levels for Personal Relationships and Personal Health Variables by Awareness of Programs in Cordova Sample*

Program Awareness Group 0=no/1=yes	Talk w/Relatives	Ask for Help	Relations w/Relatives	Relations w/Others	Physical Health	Emotional Health
Sound Alternatives	ns	ns	ns	.05 N>Y	.02 N>Y	ns
Cordova Family Resource Center	.005 Y>N	ns	ns	ns	.03 N>Y	ns
Growing Together Community Education	.002 Y>N	ns	.08 Y>N	ns	ns	ns
Peer Listener Program	.002 Y>N	.001 Y>N	ns	ns	ns	.10 Y>N
Talking Circle	ns	ns	ns	.04 N>Y	.04 N>Y	ns
Prince William Sound RCAC	ns	ns	.04 N>Y	ns	ns	.03 N>Y

(n=200)

*Only those significance levels of .10 or less are reported (one-tailed test).

Table 27. Mann-Whitney Test Significance Levels for Personal Relationships and Personal Health Variables by Program Participation in Cordova Sample*, 1997 Community Survey

Program Awareness Group 0=no/1=yes	Talk w/Relatives	Ask for help	Relations w/Relatives	Relations w/Others	Physical Health	Emotional Health
Received or picked up leaflets about coping or stress	.00 Y>N	ns	ns	ns	ns	.06 N>Y
Spoken to a Peer Listener about personal or community issues	.02 Y>N	.02 Y>N	ns	ns	ns	ns
Read newspaper articles on technological disasters	.06 Y>N	.04 Y>N	ns	ns	.05 N>Y	ns
Listened to radio broadcasts on technological disasters	ns	ns	.04 Y>N	n	ns	ns
Registered for Shaq shoe at the Iceworm Festival	.00 Y>N	.05 Y>N	ns	ns	.05 N>Y	.07 N>Y
Collected materials at the Iceworm Festival	.01 Y>N	.01 Y>N	ns	ns	ns	ns
Received information in mail about recovery from technological disasters	.08 Y>N	ns	ns	.07 N > Y	.01 N>Y	

(n=200)

*Only those significance levels of .10 or less are reported (one-tailed test).

Table 28. T-Test Significance Levels for Psychological Stress Scales by Awareness of Programs in Cordova Sample*, 1997 Community Survey

Program Awareness Group 0=no/1=yes	Depression	Intrusion	Avoidance	Global
Sound Alternatives	ns	ns	ns	ns
Cordova Family Resource Center	ns	ns	ns	ns
Growing Together Community Education	ns	ns	ns	ns
Peer Listener Program	.10 Y>N	ns	ns	ns
Talking Circle	.01 Y>N	.01 Y>N	ns	ns
Prince William Sound RCAC	.07 Y>N	.00 Y>N	ns	.03 Y>N

(n=200)

*Only those significance levels of .10 or less are reported (one-tailed test).

Table 29. T-Test Significance Levels for Psychological Stress Scales by Program Participation in Cordova Sample,*

Program Participation Group 0=no/1=yes	Depression	Intrusion	Avoidance	Global
Received or picked up leaflets about coping or stress	ns	ns	ns	ns
Spoken to a Peer Listener about personal or community issues	.01 N>Y	.08 Y>N	ns	ns
Read newspaper articles on technological disasters	ns	.10 Y>N	ns	ns
Listened to radio broadcasts on technological disasters	.04 Y>N	.00 Y>N	.07 Y>N	.01 Y>N
Registered for Shaq shoe at the Iceworm Festival	ns	.03 Y>N	.02 Y>N	.01 Y>N
Collected materials at the Iceworm Festival	ns	.04 Y>N	.07 Y>N	.03 Y>N
Received information in mail about recovery from technological disasters	.025 Y>N	ns	ns	ns

(n=200)

*Only those significance levels of .10 or less are reported (one-tailed test).

Table 30. Mann-Whitney Test Significance Levels for Personal Relationships and Personal Health Variables by Awareness of

Pro

Program Awareness Group 0=no/1=yes	Talk w/ Relatives	Ask for Help	Relations w/ Relatives	Relations w/ Others	Physical Health	Emotional Health
Sound Alternatives	.0435 Y>N	ns	ns	ns	ns	ns
Cordova Family Resource Center	.0435 Y>N	ns	ns	ns	ns	ns
Growing Together Community Education	ns	ns	.0015 N>Y	.0785 N>Y	ns	ns
Peer Listener Program	ns	ns	ns	ns	ns	.0090 Y>N
Talking Circle	ns	ns	.0350 N>Y	.0610 N>Y	.0605 N>Y	ns
Prince William Sound RCAC	ns	ns	.0515 N>Y	ns	ns	ns

1. Only those significance levels of .10 or less are reported (one-tailed test).

Awareness of programs yielded few significant differences for levels of personal relationships and personal health variables. Commercial fishermen who were aware of the Talking Circle had significant differences in terms of relationships with relatives and non-relatives and in terms of personal health. Their social relationships tended to be better and the group had significantly fewer health problems. Fishermen who were aware of the Growing Together Community Education Program also had significantly better relationships with relatives and non-relatives compared to those who were not aware of the program. Relationships with relatives also tended to be significantly better among those who were aware of the Prince William Sound Regional Citizens' Advisory Council. Commercial fishermen who were aware of the Cordova Family Resource Center and Sound Alternatives were significantly more likely to talk with friends and relatives about personal problems. On the other hand, fishermen who were aware of the Peer Listener Program were significantly more likely to perceive themselves as having more emotional health problems.

An analysis was conducted for the Cordova sample to investigate the relationship between awareness of community intervention programs and psychological stress. A Mann-Whitney U test was conducted to test for significant differences. The results are presented in Table 32. Awareness of Sound Alternatives was significantly related to psychological stress in that those who were aware had higher levels of depression, avoidance and global stress. A similar significant relationship was found for awareness of the Cordova Family Resource Center and depression and avoidance and for awareness in the Growing Together Community Education and depression. This suggests that commercial fishermen with higher levels of psychological stress may have sought out these organizations to help them cope with their stress.

An analysis was also conducted for the Cordova sample to investigate the relationship between participation in community intervention programs and psychological stress. The results are presented in Table 33. A significant relationship was found between all four measures of psychological stress and receiving leaflets about coping with stress and listening to radio broadcasts on technological disasters. A similar relationship was found between registering for the autographed Shaquille O'Neal basketball shoe and depression. As was the case with awareness, respondents with higher levels of psychological stress were more likely to participate in these programs which suggest they may have participated because they perceived themselves to need help. These results also indicate that the intervention program accurately targeted highly stressed commercial fishermen.

Table 31. Mann-Whitney Test Significance Levels for Personal Relationships and Personal Health Variables by Program Participation in Cordova Commercial Fishermen¹.

Program Participation Group 0=no/1=yes	Talk w/ Relatives	Ask for Help	Relations w/Relative s	Relations w/Others	Physical Health	Emotional Health
Received or picked up leaflets about coping or stress	.0820 Y>N	.1030 Y>N	.0465 N>Y	.0065 Y>N	.0045 Y>N	.0465 Y>N
Spoken to a Peer Listener about personal or community issues	ns	ns	ns	ns	ns	.0580 Y>N
Read newspaper articles on technological disasters	ns	.0410 Y>N	ns	ns	ns	ns
Listened to radio broadcasts on technological disasters	ns	ns	.0980 N>Y	ns	ns	.0506 Y>N
Registered for Shaq shoe at the Iceworm festival	.0290 Y>N	ns	ns	ns	ns	.0504 Y>N
Collected materials at the Iceworm festival	.0650 Y>N	.0550 Y>N	ns	ns	ns	.0830 Y>N
Received information in mail about recovery from technological disasters	.0985 Y>N	ns	ns	.0730 Y>N	ns	.0930 Y>N

1. Only those significance levels of .10 or less are reported (one-tailed test).

Table 32. Mann-Whitney Test Significance Levels for Psychological Stress Scales by Awareness of Programs for Cordova Commercial Fishermen¹.

Program Awareness Group 0=no/1=yes	Depression	Intrusion	Avoidance	Global
Sound Alternatives	.0560 Y>N	ns	.0490 Y>N	.1015 Y>N
Cordova Family Resource Center	.0385 Y>N	ns	.0985 Y>N	ns
Growing Together Community Education	.0755 Y>N	ns	ns	ns
Peer Listener Program	ns	ns	ns	ns
Talking Circle	ns	ns	ns	ns
Prince William Sound RCAC	ns	ns	ns	ns

1. Only those significance levels of .10 or less are reported (one-tailed test).

Table 33. Mann-Whitney Test Significance Levels for Psychological Stress Scales by Program Participation for Cordova Commercial Fishermen¹.

Program Participation Group 0=no/1=yes	Depression	Intrusion	Avoidance	Global
Received or picked up leaflets about coping or stress	.0025 Y>N	.0805 Y>N	.1065 Y>N	.0705 Y>N
Spoken to a Peer Listener about personal or community issues	ns	ns	ns	ns
Read newspaper articles on technological disasters	ns	ns	ns	ns
Listened to radio broadcasts on technological disasters	.0610 Y>N	.0920 Y>N	.0630 Y>N	.0470 Y>N
Registered for Shaq shoe at the Iceworm festival	.0840 Y>N	ns	ns	ns
Collected materials at the Iceworm festival	ns	ns	ns	ns
Received information in mail about recovery from technological disasters	ns	ns	ns	ns

1. Only those significance levels of .10 or less are reported (one-tailed test).

In order to further examine the relationship between psychological stress and awareness of and participation in community intervention programs, an analysis was conducted of the change in psychological stress among fishermen from 1995 to 1997. The same stress items were asked in the 1995 survey for these respondents, thus change in stress was calculated by subtracting the 1997 scale score from the 1995 scale score. Changes in psychological stress for the Cordova sample are described in Table 34. The results indicate that almost one-half of the Cordova sample scored higher on the depression scale in 1997, than they did in 1995. The mean change of -.862 indicates a slight but insignificant increase in depression levels among the Cordova sample. However, for event-related psychological stress, the measures indicated a statistically significant reduction of stress from 1995 to 1997 with over one-half of the sample experiencing a decline in intrusion, avoidance and global stress. This pattern in individual level change scores strongly suggests a successful intervention outcome. These significant decreases in event-related stress characterized approximately 2 out of every 3 commercial fishermen indicating a successful intervention for this high-risk occupational group.

Table 34. Changes in Psychological Stress for Cordova Commercial Fishermen, 1995-97 (Percentages)

Measure	Increased Stress	Stayed the Same	Decreased Stress	Mean Change in Stress	Paired Sample T-Test*
Depression	48.3	5.2	46.6	- .862	ns
Intrusion	29.5	9.8	60.7	2.623	.027
Avoidance	34.4	13.1	52.5	2.623	.026
Global	34.4	4.9	60.7	5.246	.011

n=61

Next, changes in psychological stress from 1995 to 1997 were compared for the Cordova and Non-Cordova samples. Table 35 reports results which indicate that with the exception of depression, the Cordova sample experienced a greater decline in stress levels than the Non-Cordova sample. Although, these differences were not statistically significant, Cordova commercial fishermen did experience more positive change than non-Cordova fishermen.

Table 35. Changes in Psychological Scale Means (1995-97) and Mann-Whitney U Significance for Cordova and Non-Cordova, Commercial Fishermen

Measure	Cordova	Non-Cordova	Significance (One-tailed test)
Depression	-.862	1.723	ns
Intrusion	2.623	1.696	ns
Avoidance	2.623	.523	ns
Global	5.246	2.217	ns

Further analysis was conducted for the Cordova commercial fishermen in order to investigate the relationship between awareness of community intervention programs and changes in psychological stress from 1995 to 1997. Once again, a Mann-Whitney U test was conducted to test for significant differences. The results are presented in Table 36. There were three significant relationships indicated by the analysis. Awareness in the Growing Together Community Education program was significantly related to a decline in Intrusion and Global stress indicating a possible positive impact from the intervention program. On the other hand, awareness of the Peer Listener Program was significantly related to an increase in avoidance behavior.

Table 36. Mann-Whitney Test Significance Levels for Changes in Psychological Stress Scales (1995-97) by Awareness of Programs for Cordova Commercial Fishermen¹.

Program Awareness Group 0=no/1=yes	Depression	Intrusion	Avoidance	Global
Sound Alternatives	ns	ns	ns	ns
Cordova Family Resource Center	ns	ns	ns	ns
Growing Together Community Education	ns	.0240 Y>N	ns	.0785 Y>N
Peer Listener Program	ns	ns	.0960 N>Y	ns
Talking Circle	ns	ns	ns	ns
Prince William Sound RCAC	ns	ns	ns	ns

1. Only those significance levels of .10 or less are reported (one-tailed test).

Table 37 investigates the relationship between participation in community intervention programs and changes in psychological stress. There were three significant relationships found in the analysis. First, reading the newspaper articles was significantly related to an increase in depression. However, reading the newspaper articles was significantly related to a decrease in avoidance behavior. Likewise, picking up materials at the Iceworm Festival was significantly related to a decrease in avoidance behavior.

Table 37. Mann-Whitney Test Significance Levels for Changes in Psychological Stress Scales (1995-97) by Program Participation for Cordova Commercial Fishermen¹.

Program Participation Group 0=no/1=yes	Depression	Intrusion	Avoidance	Global
Received or picked up leaflets about coping or stress	ns	ns	ns	ns
Spoken to a Peer Listener about personal or community issues	ns	ns	ns	ns
Read newspaper articles on technological disasters	.0103 N>Y	ns	.0615 Y>N	ns
Listened to radio broadcasts on technological disasters	ns	ns	ns	ns
Registered for Shaq shoe at the Iceworm festival	ns	ns	ns	ns
Collected materials at the Iceworm festival	ns	ns	.0605 Y>N	ns
Received information in mail about recovery from technological disasters	ns	ns	ns	ns

1. Only those significance levels of .10 or less are reported (one-tailed test).

Summary of Evaluation

The major empirical findings of this evaluation of the Growing Together community education program are as follows:

1) *Planning*. The project plan was developed with substantial levels of participation by a wide range of leaders and other citizens in the impact community. This approach allowed program development to emerge with maximum input from the local, grass roots level.

2) *Implementation*. Each of the six components of the planned program were effectively implemented — there were no failures to implement the intended intervention. Findings from the 1997 surveys of the community at large, and for commercial fishermen, show that Cordova residents had greater awareness of the program and its contents than did non-residents. Similarly, more Cordova residents reported that they participated in program activities than did non-residents.

3) *Targeting of the Implementation*. Individuals who had awareness of project programs, and/or had participated in the programs, were generally the more distressed community members. This finding suggests that the programs reached their intended audience — the intervention occurred with the “right” segment of Cordovan residents, that is, those most in need of the educational information.

4) *Outcomes*.

a. *Knowledge*. As hypothesized, residents in the target community demonstrated somewhat greater knowledge of technological disasters and their effects, and of coping than non-residents.

b. *Help seeking behavior.* Consistent with the goals of the program, residents of the target community engaged in greater levels of help seeking behavior than non-residents.

c. *Social relationships.* Results from the 1997 community surveys show no difference in changes in personal relationships over the preceding year for targeted and control communities. This was a desired outcome of the intervention. Among the members of a major risk group, commercial fishermen, personal relationships had deteriorated more among Cordova residents than others. Nonetheless, listening to radio programs and receiving educational leaflets was associated with improvement in social relationships with non-relatives. In terms of effects of the Growing Together program on social relationships, the outcomes reveal very modest positive impacts.

d. *Psychological distress.* Findings from surveys of the community show that measures of event-related distress, including intrusive stress and avoidance behavior declined more rapidly among Cordovan residents than non-residents. Furthermore, significant declines in event-related measures of psychological stress occurred for the majority of commercial fishermen, suggesting a rather effective and successful intervention for this high-risk occupational group. Nonetheless, psychological stress remained significantly higher in the impact community (Cordova). This pattern of findings is consistent with the following interpretation: the intervention may have had positive effects in reducing event-related stress in the impact community, but these effects were insufficient to erase the long-term consequences of EVOS.

Conclusions

The community impacts of technological disasters have been increasingly studied over the last twenty-five years. Major catastrophes such as Bophal, Chernobyl, Love Canal, Three-Mile Island and numerous lesser-known contamination events have all resulted in community disruption, resource loss, psychological stress and in the most extreme cases, the demise of the victimized community (Baum and Fleming 1993; Kroll-Smith and Couch 1993A; 1993B; Erikson 1994).

In contrast to natural disasters, technological disasters produce a chronic pattern of social and psychological impacts which defies traditional programmatic efforts for community recovery. This chronic pattern of social disruption and psychological stress has been empirically documented for communities impacted by the largest oil spill in North American history --- the *Exxon Valdez* (Palinkas 1993; Spies *et al* 1996; Picou *et al* 1997). Given that no specific intervention programs have been targeted for victims of such events, the present project provided an original strategy for developing, implementing and evaluating a community education program designed to reduce the chronic community impacts of the *Exxon Valdez* oil spill. Although research-based educational programs have previously been used in rural areas to improve family functioning, the program designed and implemented in Cordova is the first attempt to mitigate the long-term problems produced by technological disasters (Fetsch and Gebeke 1994; 1995). The project took approximately three years to complete, with the actual implementation of all six pilot programs occurring from late January of 1996 through early February of 1997.

A quasi-experimental design was developed for a quantitative evaluation of this program, which included community-wide surveys of Cordova (target community) and Petersburg (control community) and pre and post tests of one high-risk group -- commercial fishermen (see Table 3). The results reveal a number of successful program outcomes, indicating that the program was effectively implemented and that targeted residents, that is, those in need, participated in program activities. Cordova residents and commercial fishermen had greater knowledge of technological disasters, their impacts and appropriate coping skills than control groups. Furthermore, it was also found that Cordovans increased their help seeking behaviors and to a lesser degree improved their relationships with other community residents. Most important, significant declines in spill-related stress levels were found for commercial fishermen, indicating a rather successful intervention for this high-risk group.

These findings suggest that the program did result in a number of positive consequences for a community chronically impacted by a major technological disaster. However, as one would realistically expect, the long-term social and psychological consequences of the *Exxon Valdez* oil spill still persist, given the continuing observed differences in stress levels between Cordova and Petersburg. One can only surmise from our results that if the Growing Together program was implemented earlier in the course of this technological disaster and if a strong organizational culture characterized local mental health organizations, more effective program outcomes would have been obtained. Furthermore, it is also possible that by extending the length of the implementation period, that is for two years rather than one, more effective positive results would have ensued. Our results clearly identify a number of positive program outcomes, coupled with observations of continuing problems with deteriorating social relationships and high levels of spill-related psychological stress. Attempts to mitigate these lingering patterns of disruption and stress should continue in Cordova given the program successes identified in this report.

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