Attitudes and beliefs about environmental hazards in three diverse communities in Texas on the border with Mexico

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Objective. Since communicating risk related to environmental hazards has consistently presented a challenge to government agencies and industries, our objective was to better understand the attitudes and beliefs of three communities, so as to help agencies and industries develop better risk communication interventions.

Methods. We explored attitudes and beliefs about environmental risks in three diverse communities in Texas on the border with Mexico, in the county of El Paso. During the summer of 1995, using a door-to-door survey, we interviewed 147 individuals, using a questionnaire based upon an existing instrument. Interviews were conducted in three very different areas of the county: semirural low-income, urban low-income, and suburban upper-income. We randomly selected specific sections in each of the three communities for inclusion in the sample. We assessed attitudes and beliefs about regulations and experts, risk and hazards, and how to address environmental issues.

Results. Attitudes and beliefs varied among the three communities, especially in the assessment of riskiness of various hazards. In general, there was mistrust of government agencies and of industries, a strong feeling that the environment can be improved, and a lack of understanding about what actions individuals might take to improve the environment.

Discussion. Agencies need to find ways to increase their credibility with the public, and they should assess communities in order to understand the attitudes of the residents.

Key words Surveys, environmental health, public opinion, Texas, Hispanic Americans.

ABSTRACT

Government agencies and industries often are responsible for communicating environmental risk information to the public regarding, for example, regulatory decisions, industrial practices, or adverse events. Communicating risk related to environmental hazards has consistently presented a challenge to government agencies and industries. Recommendations regarding how agencies and industries should conduct effective risk communication have been developed and published (1–4). Despite these efforts, agencies and industries continue to encounter difficulties in effectively communicating with the public concerning environmental risks.

Risk communication problems stem not only from the message itself, but also from characteristics of the communicator and the audience, as well as the context in which the risk communication occurs (5). When evaluating environmental risks, government agencies and industries tend to view dimensions of the risk differently than the public (6). The public may tend to focus on more qualitative aspects of the risk (e.g., catastrophic potential, equity, dread, uncertainty) while agencies and industries tend to focus on aspects emphasized in the quantitative
Risk assessors have erro-
neously assumed that the public is a
homogeneous group with regard to
environmental risk perceptions (5).
Different segments of the popula-
tion frequently have disparate beliefs,
attitudes, values, and levels of knowledge
regarding environmental risk, as a re-
sult of underlying social, political, and
economic differences (8). Failing to pay
attention to the manner in which the
public constructs its view of environ-
mental risks and their attitudes and
beliefs regarding those risks may neg-
atively impact the risk communica-
tion process (5).

Even with a good understanding of a
group’s beliefs and attitudes, commu-
nication efforts can fail completely if
the public lacks confidence in the en-
tity providing information. Public con-
fidence and trust in government and
industry is often lacking, particularly
when communities are facing con-
tentious environmental issues (9–12).
Many risk management and communi-
cation tensions and disputes have been
attributed to the climate of mistrust be-
tween the public and others involved in
risk management decisions, including
government and industry (11, 12). Neg-
avative events, such as accidents or with-
holding information about risk events,
can be memorable and may have a last-
ing detrimental impact on an agency’s
or industry’s credibility (1). As with risk
perception, various segments of the
public may have different degrees of
trust in government agencies or indus-
tries due to specific prior experiences or
different individuals.

Government agency and industry
representatives who are responsible
for communicating with the public about
environmental risks may not have an adequate understanding of the public’s underlying attitudes and
beliefs toward these risks, and how
these beliefs can influence responses
to their messages. Understanding the
public’s attitudes and beliefs toward
environmental risks, along with the
variations in those beliefs among dif-
ferent segments of the public, may help
agency and industry professionals en-
gage in more effective risk communica-
tion efforts. Such an understanding is
particularly important for the border
region of the United States of America
and Mexico. This area is a unique
blend of cultures, customs, and lan-
guages, and it encompasses a wide
range of living conditions. In addition,
tens of thousands of area residents
move back and forth across the border
on a daily basis, and many families
have roots in both countries (13).

Learning to effectively communicate
information about environmental risks
is especially important for agencies
along the United States-Mexico border
because of industrial growth due to the
North American Free Trade Agreement
(NAFTA), the community’s growing aware-
ness of health risks associated with envi-
ronmental contamination, and the increas-
ing concern about the movement of contaminants from each of the countries into the
other. Over the last several years, local,
state, and federal agencies from both of
the countries have been working on a
plan to address these issues (14). For
environmental and health agencies to
effectively disseminate information
about environmental issues to commu-
nity members, and to accurately gather
information from these diverse com-
munities regarding environmental prob-
lems and potential solutions, an under-
standing of the attitudes and beliefs of
border residents around issues of envi-
ronmental health is essential.

The purpose of this pilot study was
to explore the attitudes and beliefs of
three diverse communities in Texas
on the United States-Mexico border reg-
arding environmental hazards, gov-
ernment agencies, and the residents’
ability to change the environment, as
well as the implications that these
findings have for future risk commu-
nication efforts.

METHODS

Study communities

According to the 1990 United States
census, El Paso County, Texas, had a
population of approximately 600 000
residents. The vast majority of those
persons were living in the city of El
Paso, and over 70% of the county resi-
dents were Hispanic.

There is great variability in income
and education levels within El Paso
County. To assess the extent to which
attitudes and beliefs varied within the
area, we selected three very different
communities, which will be referred to
as Communities A, B, and C. All three
of the communities are located in El
Paso County, with two of them within
the city limits.

Community A is located just outside
the city limits of El Paso. It is a colonia,
a low-income semirural area with
much substandard housing and lack-
such municipal services as piped
water, sewerage, and garbage col-
collection. According to the 1990 United
States census, median per-capita in-
come in this area was only US$ 5 500,
and almost 90% of the residents re-
ported their ethnicity as Hispanic.

Communities B and C are both sit-
uated within the city of El Paso and
receive all usual municipal services.
Community B is a low-income neigh-
borhood next to an industrial area con-
taining chemical and garment manu-
facturing plants as well as two oil
refineries. Over 95% of these residents
are Hispanic, with a median per-capita
income of only US$ 4 600, according
to the 1990 census. Community C is a
higher-income suburban area of the
city, consisting mostly of residences
and retail businesses. The median per-
capita income of this area was almost
US$ 18 000, and only 40% were His-
panic, according to the 1990 census.

Instrument development

Our study questionnaire was based
on an existing instrument that Slovic
and associates (15) developed for use
in Canada, and we adapted it for our
study. Our questionnaire included
items regarding attitudes about reg-
ulations and experts, beliefs about
the riskiness of various environmental
contaminants, and attitudes and beliefs
about how to address environmental
problems. To assess these attitudes and
beliefs, respondents were read a series of statements and asked to agree or disagree with each one, using a 4-point Likert scale ranging from “agree strongly” to “disagree strongly.” To assess general perceptions of risk, respondents were given a list of hazards, and asked to rate the “riskiness” of each item, both for themselves and for the community as a whole, using a five-point Likert scale ranging from “very high risk” to “almost no risk.” The results of the general perceptions of risk have been reported elsewhere (16).

Data collection

At the beginning of each day of data collection, a section of each of the three communities was randomly chosen. Interviewers approached each residence in this selected neighborhood; however, no attempts were made to return to homes where no one answered the door during the first attempt. The interviewers explained the purpose of the study, administered a written informed consent, and, if the resident agreed to participate, conducted the interview in the resident’s home. Questionnaires were available in English or Spanish, and the participants were asked to choose the language that they felt most comfortable using. The interview was approximately 40 minutes long.

Interviewers included two of the authors, as well as four graduate students from the University of Texas-Houston School of Public Health at El Paso. All interviewers were bilingual, and interviews were done in Spanish or English, depending upon the wishes of the respondent.

Data collection lasted from May to September 1995, during which 147 interviews were completed: 51 in Community A, 50 in Community B, and 46 in Community C. Of the residents who were contacted, fewer than 10% refused to participate.

Data analysis

We analyzed the survey data using SPSS for Windows Version 8.0 statistical software (SPSS, Chicago, Illinois, United States of America). Frequencies and proportions were used to describe the sample. Comparisons of attitude responses were made across the three communities. The chi-square statistic was used to assess the statistical significance of these comparisons. Our tables accompanying this article indicate where there were statistically significant associations between the distribution of responses to the statement and the community of the respondents.

RESULTS

Regulations and experts

There were significant differences in attitudes among the three communities in the area of regulations and experts (Table 1). For example, among the residents of the higher-income, Community C neighborhood there was a general pattern of lower trust in experts, the government, and the efficacy of regulation. While around half of the respondents in the two lower-

<table>
<thead>
<tr>
<th>Statement and responses</th>
<th>Community A</th>
<th>Community B</th>
<th>Community C</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Experts are able to make true estimates of the health risks from chemicals in the environment.”c</td>
<td>SA 44.9</td>
<td>52.1</td>
<td>15.2</td>
<td>37.8</td>
</tr>
<tr>
<td></td>
<td>A 26.5</td>
<td>29.2</td>
<td>56.5</td>
<td>37.1</td>
</tr>
<tr>
<td></td>
<td>D 20.4</td>
<td>14.6</td>
<td>15.2</td>
<td>16.8</td>
</tr>
<tr>
<td></td>
<td>SD 8.2</td>
<td>4.2</td>
<td>13.0</td>
<td>8.4</td>
</tr>
<tr>
<td>“Decisions about health risks should be left to the experts.”c</td>
<td>SA 30.0</td>
<td>36.0</td>
<td>6.7</td>
<td>24.8</td>
</tr>
<tr>
<td></td>
<td>A 10.0</td>
<td>8.0</td>
<td>11.1</td>
<td>9.7</td>
</tr>
<tr>
<td></td>
<td>D 24.0</td>
<td>26.0</td>
<td>26.7</td>
<td>25.5</td>
</tr>
<tr>
<td></td>
<td>SD 36.0</td>
<td>30.0</td>
<td>55.6</td>
<td>40.0</td>
</tr>
<tr>
<td>“I believe there are enough laws to regulate chemical risks.”c</td>
<td>SA 22.9</td>
<td>25.0</td>
<td>8.9</td>
<td>19.1</td>
</tr>
<tr>
<td></td>
<td>A 25.0</td>
<td>35.4</td>
<td>13.3</td>
<td>24.8</td>
</tr>
<tr>
<td></td>
<td>D 18.8</td>
<td>14.6</td>
<td>37.8</td>
<td>23.4</td>
</tr>
<tr>
<td></td>
<td>SD 33.3</td>
<td>25.0</td>
<td>40.0</td>
<td>32.6</td>
</tr>
<tr>
<td>“When there is a really serious health problem, the government will do something about it. Until they tell me about a specific problem, I don’t have to worry.”c</td>
<td>SA 17.6</td>
<td>30.6</td>
<td>4.4</td>
<td>17.9</td>
</tr>
<tr>
<td></td>
<td>A 11.8</td>
<td>14.3</td>
<td>20.0</td>
<td>15.2</td>
</tr>
<tr>
<td></td>
<td>D 19.6</td>
<td>6.1</td>
<td>26.7</td>
<td>17.2</td>
</tr>
<tr>
<td></td>
<td>SD 51.0</td>
<td>49.0</td>
<td>48.9</td>
<td>49.7</td>
</tr>
</tbody>
</table>

a Community A is a low-income semirural area near the city of El Paso, Community B is a low-income neighborhood within the city of El Paso, and Community C is a higher-income suburban section of the city.

b The figures indicate the percentage of persons in each community agreeing or disagreeing with the statement, with SA = strongly agree, A = agree, D = disagree, and SD = strongly disagree.

c Statements for which there was a statistically significant association between the distribution of responses to the statement and the community of the respondents (P ≤ 0.03).
income communities, A and B, strongly agreed with the statement that “experts are able to make true estimates of the health risks from chemicals in the environment,” only 15% of the residents of Community C held this view. Similarly, about a third of the sample from Communities A and B strongly agreed that decisions regarding risk should be left to these experts, but only 7% of the residents from the higher-income area strongly agreed with this statement.

Just under half of the overall sample agreed that there were enough laws to regulate chemical risks (Table 1). There appeared to be little confidence in the effectiveness of government, as only a third of the respondents believed that “government would do something about a really serious health problem.” Community C again had substantially different responses to these items as compared to the two other, lower-income areas. The wealthier respondents were far less likely to strongly agree that there were enough laws or that the government would act where there was a problem. Residents from Community B had a much higher level of confidence that the government would take care of a serious environmental problem.

Risk beliefs

While a majority of the respondents overall (58%) agreed or strongly agreed that “most chemicals cause cancer,” almost three-fourths agreed that the risk posed by smoking and diet was greater than the risk due to chemicals in the environment (Table 2). Over two-thirds of the sample felt that they could protect themselves from environmental pollutants by “improving their individual lifestyle, such as by exercising and eating properly.” Residents from the higher-income area, Community C, were far less likely to believe that most chemicals caused cancer, and somewhat less likely to think that lifestyle factors posed greater risk than environmental contaminants. There was a clear difference in the belief that one could protect oneself, with 82% of the residents from semirural Community A agreeing or strongly agreeing, as compared to only 54% of those from the high-income, suburban community.

Overall, the respondents appeared to be quite risk-adverse, with 63% strongly agreeing that they wouldn’t drink tap water containing “even a tiny amount of a substance that could make me sick” (Table 2). Again there was a clear difference among the communities, with 82% of those from Community A strongly agreeing with the statement, as compared to only 31% in the most affluent neighborhood. While about a third (32%) of the respondents strongly agreed that a “risk-free environment” was an attainable goal, a somewhat lower proportion (19%) strongly felt that “El Pasoans should be willing to accept some risk to their health in order to improve the economy.” There again was a strong distinction in these beliefs between the higher-income community (Community C) and the other areas, with only 2% of the residents from the higher-income community strongly agreeing with this statement.

Community C residents also differed in their level of concern about health risks and in their feelings of control (Table 2). While over 35% of the respondents from the two lower-income communities felt that El Paso was “too worried about small health risks,” only 16% of the respondents from Community C agreed with this statement. Similarly, about half of the respondents from both Community A and Community B felt that they had “little control over risks to my health,” while only a third of the residents from Community C shared this attitude. Just under half (47%) of all respondents agreed that they “don’t worry about chemicals because there are just too many other things in my life that I have to deal with.”

Addressing environmental problems

Overall, the respondents seemed to believe strongly in the potential for solving environmental problems, but without necessarily having a clear direction on how to do so (Table 3). There was almost universal agreement that people working together could change the environment, that “changes people make today will have an effect on the environment of the future,” and that there are things that people could do to improve the environment. At the same time, 50% responded they were “completely at a loss about what to do about environmental risks,” indicating a lack of knowledge about what actions individuals might take to improve the environment.

DISCUSSION

Differences in attitudes and beliefs about environmental risk were found among the three communities studied. Regarding regulations and experts, the residents of the suburban, higher-income community were more likely to believe that more laws regulating chemicals were needed, even though residents of the semirural community were more likely to perceive that they had been exposed to chemicals because of aerial application of pesticides on nearby fields. It may be that the more rural group sees laws regulating chemicals as a possible threat to their livelihood, since many are employed in agriculture. A much higher proportion of respondents from the two low-income areas agreed that some risks had to be accepted to strengthen the economy.

Seventy-five percent of the respondents felt that experts could make accurate estimates of risk. This did not differ by area of the county, and it points to a general lack of understanding about how experts determine risk. The belief that experts can accurately estimate risk may lead to many of the misunderstandings that are common in risk communication efforts. People may feel that the experts are just not telling everything they know, when, in fact, they may be sharing as much as they understand about the risk. Agencies should include information on how risk is determined when preparing risk communication materials.
Mistrust of agencies and government officials was evident in that the majority of the sample did not believe that decisions should be left to the experts. There were differences by community, however, with the two lower-income communities more likely to agree that experts should make the decisions. About half of the respondents in all three communities appeared to have little trust in government actions when there was a problem.

In order to improve the environment and regain the trust of the public, agencies must change their approach to educating the public. First, they must act in ways that will earn trust. According to Chess and associates (17), agencies can take a number of steps to do this. These include involving community residents in decisions that affect their lives, releasing information as soon as it is available, paying attention to people’s feelings, following up with community members, admitting making mistakes, being honest about not knowing answers to specific questions, using plain rather than technical language, and making sure that all agencies—and everyone

<table>
<thead>
<tr>
<th>Statement and responses</th>
<th>Community&lt;sup&gt;a, b&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Most chemicals cause cancer.</em>&lt;sup&gt;c&lt;/sup&gt;</td>
<td>A 63.4</td>
</tr>
<tr>
<td></td>
<td>A 22.0</td>
</tr>
<tr>
<td></td>
<td>D 9.8</td>
</tr>
<tr>
<td></td>
<td>SD 4.9</td>
</tr>
<tr>
<td><em>The risk of getting cancer from things like smoking and diet is much greater than the risk of cancer from chemicals in the environment.</em></td>
<td>A 37.8</td>
</tr>
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<td></td>
<td>A 28.9</td>
</tr>
<tr>
<td></td>
<td>D 20.0</td>
</tr>
<tr>
<td></td>
<td>SD 13.3</td>
</tr>
<tr>
<td><em>People can protect themselves against health risks from pollution by improving their individual lifestyle, such as by exercising and eating properly.</em>&lt;sup&gt;c&lt;/sup&gt;</td>
<td>A 68.6</td>
</tr>
<tr>
<td></td>
<td>A 13.7</td>
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<tr>
<td></td>
<td>D 9.8</td>
</tr>
<tr>
<td></td>
<td>SD 7.8</td>
</tr>
<tr>
<td><em>If even a tiny amount of a substance that could make me sick were found in my tap water, I wouldn’t drink it.</em>&lt;sup&gt;c&lt;/sup&gt;</td>
<td>A 82.4</td>
</tr>
<tr>
<td></td>
<td>A 13.7</td>
</tr>
<tr>
<td></td>
<td>D 2.0</td>
</tr>
<tr>
<td></td>
<td>SD 2.0</td>
</tr>
<tr>
<td><em>I believe a risk-free environment is an attainable goal in El Paso.</em>&lt;sup&gt;c&lt;/sup&gt;</td>
<td>A 48.0</td>
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<tr>
<td></td>
<td>A 14.0</td>
</tr>
<tr>
<td></td>
<td>D 14.0</td>
</tr>
<tr>
<td></td>
<td>SD 24.0</td>
</tr>
<tr>
<td><em>El Pasoans should be willing to accept some risk to their health in order to strengthen the economy.</em>&lt;sup&gt;c&lt;/sup&gt;</td>
<td>A 29.4</td>
</tr>
<tr>
<td></td>
<td>A 23.5</td>
</tr>
<tr>
<td></td>
<td>D 15.7</td>
</tr>
<tr>
<td></td>
<td>SD 31.4</td>
</tr>
<tr>
<td><em>El Paso society is becoming too worried about small health risks.</em>&lt;sup&gt;c&lt;/sup&gt;</td>
<td>A 22.9</td>
</tr>
<tr>
<td></td>
<td>A 14.6</td>
</tr>
<tr>
<td></td>
<td>D 20.8</td>
</tr>
<tr>
<td></td>
<td>SD 41.7</td>
</tr>
<tr>
<td><em>I don’t worry about chemicals because there are just too many other things in my life I have to deal with.</em></td>
<td>A 23.5</td>
</tr>
<tr>
<td></td>
<td>A 19.6</td>
</tr>
<tr>
<td></td>
<td>D 23.5</td>
</tr>
<tr>
<td></td>
<td>SD 33.3</td>
</tr>
<tr>
<td><em>I feel I have very little control over risks to my health.</em></td>
<td>A 27.5</td>
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<tr>
<td></td>
<td>A 23.5</td>
</tr>
<tr>
<td></td>
<td>D 27.5</td>
</tr>
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<td></td>
<td>SD 21.6</td>
</tr>
</tbody>
</table>

<sup>a</sup> Community A is a low-income semirural area near the city of El Paso, Community B is a low-income neighborhood within the city of El Paso, and Community C is a higher-income suburban section of the city.

<sup>b</sup> The figures indicate the percentage of persons in each community agreeing or disagreeing with the statement, with SA = strongly agree, A = agree, D = disagree, and SD = strongly disagree.

<sup>c</sup> Statements for which there was a statistically significant association between the distribution of responses to the statement and the community of the respondents (P ≤ 0.006).
Residents of the higher-income suburban community in El Paso were more likely than persons in the two lower-income communities to accept a small risk, as evidenced by the response to the statement about tiny amounts of a substance in tap water. However, the better-off residents were less likely to feel that El Pasoans should accept some risk to strengthen the economy. Residents in the lower-income areas of the city didn’t want to take risks with tap water, but were more likely to be willing to accept some risk for the sake of the economy. Residents in the two lower-income areas were also more likely to agree that a risk-free environment is possible. Such a belief can wreak havoc on any risk communication campaign. If people believe that the world can be risk-free, they are not likely to attend to messages about the relative risks of different options.

Almost everyone agreed that communities and individuals could have a positive impact on the environment. However, 50% of the respondents said they had no idea what they as individuals could do to make a difference. In the El Paso area it appears that people need basic information about what they can do to improve the environment. In the area of risk and environmental education, there is still a need for basic information transfer.

Chess and colleagues (18, 19) found that agencies devote more effort to responding to requests for information than on starting a dialogue with communities or alerting communities to risk, and that the agencies rarely use surveys as a way to collect public input. Santos and associates (20) found similar results when they looked at industries submitting Toxic Release Inventory reports required under the United States Government’s Superfund Amendment Reauthorization Act Title III (also known as the “Emergency Planning and Community Right-to-Know Act of 1986”). Those researchers found that fewer than 10% of the industries used surveys or focus groups to identify audiences and their concerns. Agencies should be more proactive in reaching out to communities. Surveys similar to the one used in this research might be a useful starting point for dialogue.

Health and environmental agencies are expected to communicate risks and the means of prevention to entire communities. Communities, however, are varied in their makeup. It is imperative that risk communicators understand the many different attitudes and beliefs of individuals within communities. The communication of environmental risk is a tricky business. There are many complications when dealing with environmental issues, not the least of which is the tension that usually exists in the relationships among agencies, corporations, and communities. In many instances, communities feel powerless to make any changes or

### TABLE 3. Attitudes and beliefs about addressing environmental problems, El Paso County, Texas, 1995

<table>
<thead>
<tr>
<th>Statement and responses</th>
<th>Community</th>
<th>SA</th>
<th>B</th>
<th>C</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;If people work together, they can change the environment.&quot;</td>
<td>A</td>
<td>94.1</td>
<td>92.0</td>
<td>63.0</td>
<td>83.7</td>
</tr>
<tr>
<td></td>
<td>D</td>
<td>3.9</td>
<td>6.0</td>
<td>32.6</td>
<td>13.6</td>
</tr>
<tr>
<td></td>
<td>Overall</td>
<td>SD</td>
<td>2.0</td>
<td>2.0</td>
<td>1.4</td>
</tr>
<tr>
<td>&quot;Changes that people make today will have an effect on the future.&quot;</td>
<td>A</td>
<td>90.0</td>
<td>74.0</td>
<td>65.2</td>
<td>76.6</td>
</tr>
<tr>
<td></td>
<td>D</td>
<td>8.0</td>
<td>22.0</td>
<td>30.4</td>
<td>19.9</td>
</tr>
<tr>
<td></td>
<td>Overall</td>
<td>SD</td>
<td>2.0</td>
<td>4.0</td>
<td>2.7</td>
</tr>
<tr>
<td>&quot;There are things I can do that will make a difference in improving the environment.&quot;</td>
<td>A</td>
<td>86.0</td>
<td>75.0</td>
<td>52.2</td>
<td>71.5</td>
</tr>
<tr>
<td></td>
<td>D</td>
<td>10.0</td>
<td>16.7</td>
<td>39.1</td>
<td>21.5</td>
</tr>
<tr>
<td></td>
<td>Overall</td>
<td>SD</td>
<td>2.0</td>
<td>4.2</td>
<td>2.1</td>
</tr>
<tr>
<td>&quot;Nothing can be done about environmental problems like hazardous waste and air pollution.&quot;</td>
<td>A</td>
<td>15.7</td>
<td>8.2</td>
<td>4.3</td>
<td>9.6</td>
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<tr>
<td></td>
<td>D</td>
<td>3.9</td>
<td>10.2</td>
<td>6.5</td>
<td>6.8</td>
</tr>
<tr>
<td></td>
<td>Overall</td>
<td>SD</td>
<td>2.0</td>
<td>4.2</td>
<td>2.2</td>
</tr>
<tr>
<td>&quot;I feel completely at a loss about what to do about environmental risks.&quot;</td>
<td>A</td>
<td>48.0</td>
<td>28.0</td>
<td>8.7</td>
<td>28.8</td>
</tr>
<tr>
<td></td>
<td>D</td>
<td>14.0</td>
<td>18.0</td>
<td>32.6</td>
<td>21.2</td>
</tr>
<tr>
<td></td>
<td>Overall</td>
<td>SD</td>
<td>14.0</td>
<td>22.0</td>
<td>21.9</td>
</tr>
</tbody>
</table>

*Community A is a low-income semirural area near the city of El Paso, Community B is a low-income neighborhood within the city of El Paso, and Community C is a higher-income suburban section of the city.

The figures indicate the percentage of persons in each community agreeing or disagreeing with the statement, with SA = strongly agree, A = agree, D = disagree, and SD = strongly disagree.

Statements for which there was a statistically significant association between the distribution of responses to the statement and the community of the respondents (P ≤ 0.005).
to have real input into decisions. The role of those communicating on environmental risk should be to help communities understand the nature of the risk, the uncertainty of risk assessment, and the options that community residents have available to protect themselves. Before an agency can develop meaningful interventions, the agency must access and come to understand the attitudes of the varied stakeholders in the community.

REFERENCES


RESUMEN

Actitudes y creencias sobre los agentes nocivos ambientales en tres comunidades diferentes de la frontera de Texas con México

Objetivo. Una vez que la comunicación de información sobre los riesgos relacionados con agentes nocivos ambientales no ha sido fácil para los organismos gubernamentales y las industrias, el objetivo de este estudio consistió en comprender mejor las actitudes y creencias de tres comunidades, con el fin de ayudar a estos organismos a desarrollar mejores campañas de información sobre los riesgos.

Métodos. En este estudio se examinaron las actitudes y creencias sobre los riesgos ambientales en tres comunidades diferentes de la frontera entre Texas y México, en el condado de El Paso. Durante el verano de 1995 se realizó una encuesta a domicilio en la que se entrevistaron 147 individuos con un cuestionario basado en un instrumento preexistent. Las entrevistas se realizaron en tres zonas diferentes del condado: una semiárida y otra urbana de bajos ingresos y una suburbana de mayores ingresos. Los sectores específicos de cada una de las tres comunidades incluidos en la muestra fueron seleccionados aleatoriamente. Se evaluaron las actitudes y creencias sobre las leyes y los expertos, los agentes nocivos y los riesgos, y la forma de abordar los problemas ambientales.

Resultados. Las actitudes y creencias variaron según la comunidad, especialmente con respecto a la evaluación de los riesgos de varios agentes nocivos. En general hubo desconfianza en los organismos gubernamentales y las industrias, una fuerte creencia de que es posible mejorar el ambiente, y desconocimiento de las acciones que los individuos pueden poner en marcha para mejorarlo.

Conclusiones. Los organismos gubernamentales necesitan encontrar formas de incrementar su credibilidad pública y deberían sondear las comunidades con el fin de comprender las actitudes de los residentes.