**APES ~ Risk Perception and Risk Reality**

**Introduction**

We all face risks in our everyday lives. Often, we do not accurately perceive the level of

risk we introduce into our lives when we engage in an activity, or we believe the possibility of an event such as an earthquake introduces far more or less risk in our lives than it warrants. In this activity, you will survey friends and family to find out how they perceive various risks. You will also collaborate on the compilation and analysis of data collected by a team.

**Data Analysis**

**Before Class**

Before you come to class, conduct the survey, recording your results on the attached paper. Then calculate and record the average of each row of data as instructed in the survey.

**In Class**

**Graphs**

Individual Bar Graph

For the survey you conducted individually, plot all three averages (individuals 25 years of age and under, individuals 26 years of age and older, and the average of all respondents) of the “perceived risks” on the same graph. Plot perceived risk on the y-axis, choosing three different colors, one for each average group. Plot risk number 1-20 on the x-axis, leaving enough room for three bars per risk number. Title the graph and include a color key.

Team Bar Graph #1

Examine the “experts’ risk” rankings. Plot these risks on a new graph, choosing a different color for each bar. Plot expert risk on the y-axis. Plot risk number 1-20 on the x-axis. Title the graph and include a color key.

Team Bar Graph #2

Combine your data with the rest of your team members’ data and determine your team average for each age group and all respondents for each row of data. This is like the individual bar graph, but this time you’ll have three team averages instead of three individual averages.

As a team, on one piece of graph paper, plot all three averages on the same graph. Plot perceived risk on the y-axis, choosing three different colors, one for each average group. Plot risk number 1-20 on the x-axis, leaving enough room for three bars per risk number. Title the graph and include a color key.

**Discussion**

As a team, collaborate on a thoughtful, insightful and logical discussion of the results of your team's surveys. Include explanations for large differences between actual and perceived risk as well as for relatively accurate perceptions of risk for the group that was less than 25, greater than 25 and for all of the participants.

**As a team, turn in each team member's data, the data analysis, and the conclusion, stapled together with the name of each team member on the top page.**

**The Survey**

• Conduct the following survey twelve times.

• Do not allow the person being surveyed to see the responses of others.

• Do not survey anyone younger than 16 years of age.

• Do not survey anyone who has already been surveyed by an APES student (ask them first).

• Thank respondents for their participation.

Record the respondent's name at the top of the column. Use the last three columns of the survey to average the results of (1) individuals 25 years of age and under, (2) individuals 26 years of age and older, and (3) the average of all respondents.

“Please rate each of the following risks on a 1-10 scale: 10 being an activity or event which you perceive as a great risk to citizens of the United States, and 1 being an activity or event which you perceive as a minor risk to citizens of the United States.”

**SURVEY DATA TABLE** – perceived risks by individual people

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Person****Name**Age Range 🡪 |  |  |  |  |  |  |  |  |  |  |  |  | **Ave****< 25 yrs** | **Ave****>25 yrs** | **Ave****All****Surveyed** |
| Natural disasters |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Structure fires |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Drowning |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Driving an auto |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Drinking tap water |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Tobacco use |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Bicycling |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Indoor air pollution |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Outdoor air pollution |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Alcohol use |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Medical X-rays |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Flying commercial airlines |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Being slightly overweight |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Being severely overweight |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Pesticide residues on food |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| AIDS |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Living with a smoker |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Toxic waste |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Drug abuse |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Living in poverty |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **Event** | **Actual Risk** |
| Natural disasters | 1 |
| Structure fires | 3 |
| Drowning | 3 |
| Driving an auto | 7 |
| Drinking tap water | 1 |
| Tobacco use | 10 |
| Bicycling | 3 |
| Indoor air pollution | 6 |
| Outdoor air pollution | 6 |
| Alcohol use | 6 |
| Medical X-rays | 2 |
| Flying commercial airlines | 1 |
| Being slightly overweight | 9 |
| Being severely overweight | 10 |
| Exposure to pesticide residue | 2 |
| AIDS | 5 |
| Living with a smoker | 8 |
| Exposure to toxic waste | 2 |
| Drug abuse | 6 |
| Living in poverty | 10 |