

Risk Perception Factors

Involuntary vs. Voluntary:

People don't like to be forced to face a risk such as exposure to trace chemicals in tap water. But people will voluntarily assume risks such as smoking.

Uncontrollable vs. Controllable:

When preventing the risk is in someone else's hands (government's or industry's), citizens feel helpless to change the situation and are less accepting of it. If the citizen can prevent or reduce the risk (using household chemicals properly), the risk is more acceptable.

Immoral vs. Moral:

Pollution is viewed as an evil. Therefore, some people consider it unethical for governments and industries to decide that a risk is acceptable on the basis of a cost/benefit analysis or because there is a low incidence of harm.

Unfamiliar vs. Familiar:

An unfamiliar risk, such as an industrial process that produces an unpronounceable chemical, is a much less acceptable risk than something more familiar, such as taking a medication.

Dreadful vs. Not Dreadful:

A risk that could cause a much-feared or dreaded disease (like cancer) is seen as more dangerous than a risk that could cause a less-feared disease.

Uncertain vs. Certain:

Some people become uneasy when scientists are not certain about the risk posed by a hazard, such as its exact effect, severity, or prevalence.

Catastrophic vs. Common:

A risk resulting in a large-scale disastrous event (plane crash, nuclear reactor meltdown) is more dreaded than a risk affecting individuals (auto accidents, radon gas in homes).

Memorable vs. Ordinary:

Potential risks similar to those in a well-known event, such as the nuclear leaks at Three Mile Island or the release of toxic gases in Bhopal, are viewed as much more dangerous than the risk of some unheard-of or little-known event.

Unfair vs. Fair:

People become outraged if they feel they are being wrongfully exposed (for example, exposure to a risk that people in a neighboring community or a different economic bracket are not being exposed to, or exposure to a risk with no benefit). In contrast, people will accept the risk of exposure to something like medical X-rays because they perceive a benefit that equals or outweighs the risk.

Untrustworthy vs. Trustworthy:

People become outraged if they have no confidence in the institution that is the source of the risk (such as an untrustworthy company or agency). In contrast, they tend to accept risk from what they view as a reliable source.

Sources: Kamrin, Michael; Dolores J. Katz; and Martha L. Walter. *Reporting on Risk: A Journalist's Handbook on Environmental Risk Assessment*. Ann Arbor, MI: Michigan Sea Grant Program and The Foundation for American Communications, 1995.

National Research Council. *Improving Risk Communication*. Washington, DC: National Academy Press, 1989.

Slovic, Paul; Baruch Fischhoff; and Sarah Lichtenstein. "Facts and Fears: Understanding Perceived Risk." In Richard C. Schwing and Walter A. Albers Jr. (eds.) *Societal Risk Assessment: How Safe is Safe Enough?* New York: Plenum, 1980, 181-216.

Ordering of Perceived Risk for 30 Activities and Technologies¹

(Rank 1 indicates the most risky activity or technology)

ACTIVITY OR TECHNOLOGY	LEAGUE OF WOMEN VOTERS ²	COLLEGE STUDENTS ³	EXPERTS ⁴
Nuclear Power	1	1	20
Motor Vehicles	2	5	1
Handguns	3	2	4
Smoking	4	3	2
Motorcycles	5	6	6
Alcoholic Beverages	6	7	3
General Aviation (flying an airplane)	7	15	12
Police Work	8	8	17
Pesticides	9	4	8
Surgery	10	11	5
Firefighting	11	10	18
Large Construction	12	14	13
Hunting	13	18	23
Spray Cans	14	13	26
Mountain Climbing	15	22	29
Bicycles	16	24	15
Commercial Aviation	17	16	16
Electric Power (nonnuclear)	18	19	9
Swimming	19	30	10
Contraceptives (birth control)	20	9	11
Skiing	21	25	30
X-rays	22	17	7
High School/College Football	23	26	27
Railroads	24	23	19
Food Preservatives	25	12	14
Food Coloring	26	20	21
Power Mowers	27	28	28
Prescription Antibiotics	28	21	24
Home Appliances	29	27	22
Vaccinations	30	29	25

¹Slovic, Paul; Baruch Fischhoff; and Sarah Lichtenstein. "Facts and Fears: Understanding Perceived Risk." In Richard C. Schwing and Walter A. Alibbers, Jr. (eds.) *Societal Risk Assessment: How Safe is Safe Enough?* New York: Plenum, 1980, 181-216.

²The League of Women Voters is a leading voter-education organization in the United States. Forty members participated in the study.

³Thirty college students participated in the study.

⁴The experts in this study consist of a group of 15 people from across the nation who are professionally involved with risk assessment.