

Risk Assessment

Definition of Risk Assessment

- A scientific process of evaluating the adverse effects caused by a substance, activity, lifestyle, or natural phenomenon.
- Characterized by uncertainty
- Establishes a range of probability

Definition of Risk Factor

- Risk Factors increase the probability of disease, injury, or death.

(McKenzie, Pinger and Kotecki, 2002)

Healthy People

- Disease prevention and health promotion instead of only finding the cure (since 1979)
- Studying the risk factors for *getting a disease* became increasingly important.

Types of Disease

- Communicable (infectious)
- Non-communicable

- Acute
- Chronic

Examples of Risk Factors

- Obesity
- Alcoholism
- Poverty
- No helmet
- Tobacco use
- Environment

Establishing Risk Factors

**How do we know
what the risk factors are?**

Analytical Studies

- Retrospective
 - Case
 - Control
- Prospective
 - Cohort

Considerations of Risk Assessment

- Culture
- Religion
- Age
- Socioeconomics
- Environment
- Physical Biology
- Behavior/attitude
- Resources

Resource Theory

- Define the resource reservoir
 - Pathways to obtain resources?
 - Status to obtain resources?
- Recognize the lack of resources
 - Women's HIV prevention example

(DiClemente, Crosby & Kegler, 2002)

Risk Vs Resource Need Vs Strength

- Needs should be prioritized using the availability of resources.

"Giving people medicine for TB and not giving them food is like washing your hands and drying them in the dirt."

"You want to stop HIV in women? Give them jobs."

- Resources can be determined by "mapping" a community.

Kidder, Tracey, Mountains Beyond Mountains. (2003)

"Ownership" is crucial

There is no point in intervening if the community does not feel that they own the problem!

(McKenzie, Pinger & Koticki 2002)

Prevention Marketing Theory

- Step 1: Communitywide risk assessment
 - Who is doing what, with whom, where, when, how and how often
- Step 2: Social Marketing
 - Commercial marketing principles and techniques achieve socially beneficial goals
(Kotler & Zaltman, 1971)

(DiClemente, Crosby & Kegler, 2002)

Examples of Prevention Marketing

- Adolescents: “Brain on Drugs”
- Children and Adolescents: Vaccines
- All ages: Santa Claus eating cheese
- All ages: “Got Milk”
- Children and Parents: Bill Cosby

National Reports

- Monthly Vital Statistics
- Morbidity and Mortality Weekly Report (MMWR)
 - Includes outbreaks, environmental hazards

Exemplary Tools of Risk Assessment

- Individual
- Community/population

Examples of Risk Assessment on the Web

- Harvard Center for Cancer Prevention
www.yourcancerrisk.harvard.edu
 - Breast, Prostate, Lung, Colon, etc.
- National Institutes of Health
www.nih.gov
 - 10 year risk of heart attack
- Memorial Sloane Kettering Cancer Center
www.mskcc.org
 - Lung cancer, etc.

Classifying BMI

- Underweight
 - BMI < 5th percentile
- Healthy weight
 - 5th > BMI < 85th percentile
- At Risk of Being Overweight
 - 85th ≥ BMI > 95th percentile
- Overweight
 - BMI ≥ 95th percentile

Dennison, Barbara A., MD, Risk Evaluation in Pediatric Practice, Pediatric Annals (Jan 2004)

Comorbidity!

- One risk factor is never enough
- A good Risk Assessment identifies all the risks!

National Health Surveys

- National Health Care Survey
- Behavioral Risk Factor Surveillance System
- Your Risk Behavior Surveillance System
- National Health and Nutrition Examination Survey
- National Minority Substance Abuse and HIV Prevention Initiatives Survey [SAMHSA]

In Conclusion

Nurses don't necessarily need to know

1. *The cure*
2. *The causative agent*

*But we can't prevent the disease from occurring without knowing the **RISK***