

Changing Behavior

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The Extended Parallel Process Model

- Two appraisal processes
 - Threat Appraisal
 - Efficacy Appraisal
- Three Outcomes
 - No response with low perceived threat
 - Acceptance when perceived threat and efficacy are high
 - Rejection when perceived threat is high, but efficacy is low
- Example (seat belts)

Witte, et al. Effective Health Risk Messages. (2001)

Persuasive Message Theories

- Health Belief Model
- Theory of Reasoned Action
- Social Cognitive Theory
- Elaboration Likelihood Model

Witte, et al. Effective Health Risk Messages. (2001)

Health Belief Model

- Very popular!
- Example (immunization campaigns)
- Five Factors
 - Perceived barriers to performing the recommended response
 - Perceived benefits of performing the recommended response
 - Perceived susceptibility to a health threat
 - Cues to action (media, family, etc.)

Theory of Reasoned Action

- One's own beliefs about performing a behavior (attitude)
- Subjective norm
 - Beliefs about what other people think about the behavior and the motivation to comply with those other people (referents).

Social-Cognitive Theory

- Self Efficacy
 - Peoples beliefs that they can exert control over their motivation and behavior and over their social environment (people doubt this)
- Outcome Expectation
 - What you think will happen if you take a certain action

Bandura, Social Cognitive Theory (1989)

Elaboration Likelihood Model

Promote central processing
(not peripheral processing).
This takes work. Results in long lasting
behavior change.

Theories

- Explain how variables work together to influence health behaviors
- Variables are threat, efficacy and barriers

(Detail is beyond the scope of this class)

Table 4.3 Summary of Health Behavior Change Theories

Theoretical Origin of Variables	Extended Parallel Process Model	Health Belief Model	Theory of Reasoned Action	Social Cognitive Theory	Elaboration Likelihood Model
Stimuli	Fear Appeals (mass media, interpersonal, group messages, etc.)	Cues to Action Internal External	Observation/ Interaction with Peers	Personal Experiences Vicarious Experience Verbal Persuasion Physiological Arousal	Mass Media Messages Interpersonal Interactions
Motivational Variables	Threat (Susceptibility & Severity) Fear	Threat (Susceptibility & Severity)			Involvement
Internal and Environmental Resources	Self-Efficacy Response Efficacy	Benefits Barriers	Attitudes Subjective Norm	Efficacy Expectations Outcome Expectations	Ability to Process a Message
Outcome Variables	Danger Control Responses (Attitudes, Intentions, Behaviors) Fear Control Responses (Defensive Avoidance, Reactance, Denial)	Intentions Behaviors	Intentions Behaviors	Behaviors	Processing Mode (Central or Peripheral) Attitudes

Approaches

- Describe different steps to increase the persuasiveness of a health risk message
- Stages of Change Model & Social Marketing are approaches

Stages of Change Model

- Prochaska & DiClemente 1992
- Characterized by incremental steps, relapse, and sustainability
- Not a linear progression, rather a spiral with relapses

DiClemente, Crosby, Kegler, Emerging Theories in Health Promotion Practice and Research (2002)

44 ■ EFFECTIVE HEALTH RISK MESSAGES

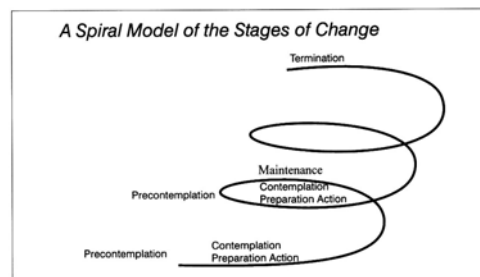


Figure 4.6. A Spiral Model of the Stages of Change
SOURCE: In search of How People Change: Applications to Addictive Behaviors, by J. O. Prochaska, C. C. DiClementes & J. C. Neross. American Psychologist, 47, 1102-1114. (1992). Copyright © 1992 by the American Psychological Association. Reprinted with permission.

The Stages

- Pre-contemplation
- Contemplation
- Preparation
- Action
- Maintenance

Precontemplation

- Denial
- No perceived problem
- No association of problem with behavior

Contemplation

- Realistic assessment of one self
- Unable to confront problem or behavior

Preparation

- Actively gathering information in preparation for behavior change

Action

- A change in behavior

Maintenance

- Constant vigilance to avoid relapse
- Remember behavior related illness are always potentially "chronic!"

Levels of Prevention (3)

- Primary
 - Aimed at those who have not started a risk behavior
- Secondary
 - Aimed at those who do not exhibit chronic behavior
- Tertiary
 - Aimed at Treatment & Maintenance

McKenzie, Piner, Kotecki, An Introduction to Community Health. (2002)

Elements of Prevention (4)

- Education
- Treatment
- Public Policy
- Law Enforcement

McKenzie, Pinger & Kotecki, An Introduction to Community Health (2002)

Education

- Limit demand by providing information
- Changing attitudes and beliefs
- Providing skills (examples)
- Changing behavior

Treatment

- Removal physical & environmental conditions that contribute to behavior (AA, NA)
- Psychological and physical hooks

Public Policy & Law Enforcement

- Courses of Actions pursued by the government

All the levels & Elements of Prevention

Save Money

Where can we apply Stages of Change Model?

- All levels of prevention
 - Primary
 - Secondary
 - Tertiary
- Two elements of prevention
 - Education
 - Treatment

Categorize the Behavior

- Addictive Behavior (physical & psychological)
 - Tobacco use (Nicotine)
 - Drug abuse (Heroin, crack, cocaine)
 - Alcohol abuse (ETOH)
- High Risk Behavior (psychological hook)
 - Over eating/ under exercising
 - Violence
 - Unsafe practices
 - Injury related
 - Sex related

Techniques for Stage Placing

Take an Excellent Health History

"The Techniques of Skilled Interviewing" (NO THREATS)

- Active listening
- Adaptive questioning
- Nonverbal communication
- Facilitation
- Echoing
- Empathetic responses
- Validation
- Reassurance
- Summarization
- Highlighting Transitions

Bickley, L., Bate's Guide to Physical Examination and History (2003)

Understand the Difference

- Illness
 - How the patient experiences the symptoms
- Disease
 - The explanation the clinician brings to the symptoms

The 4 A's

- Ask
- Advise (personalize)
- Assist
- Arrange

How does the patient react?

Be Informed!

Applying the
Stages of Change Model

Individual Applications
&
Societal Applications

Smoking Cessation

Tobacco Facts

Tobacco kills more people than all of these
causes of death combined:

- Car crashes
- AIDS
- Suicide
- Homicide
- Illicit Drug use
- Alcohol

American Cancer Society, Living Well Tobacco Free (2001)

One in every five deaths in the
United States
is smoking related

American Cancer Society, Cancer Facts & Figures (2001)

On average smokers die
about seven years earlier than
nonsmokers

CDC, Office on Smoking and Health, Unpublished data, 1994

- Cigarette smoke contains 4,000 chemicals
- 43 known carcinogens
- 401 highly toxic substances
- Examples of poisons: carbon monoxide, cyanide, formaldehyde

Why Smoke?

Psychological & Physical
Hooks

Nicotine is Not Addictive?!

Commercial Break

CEO's of Big Tobacco
Congress 1994

Smoking Cessation

An individual Application

Living Well . . . Tobacco Free

*Presented by the American Cancer Society
Eastern Division Inc.*

Refer to the book for Stages of Change Page

Four Program Components

(encompass the elements of prevention)

- Tobacco Education
- Clearing the Air
- Freshstart **
- Staying off smoking **

Freshstart Sessions

(encompass the stages of change)

- Understanding Why and How (contemplation & preparation)
- Managing the First Few Days (Action)
- Mastering the Obstacles (Action)
- Staying Quit and Enjoying it Forever (Maintenance)

Smoking Cessation

A Societal Application

CDC recognizes Tobacco
Cessation as one of the ten
greatest public health
achievements of the 20th Century

Where have we begun to succeed
as a society?

Public Policy & Law Enforcement
elements of prevention

Legislation

- 1964 Surgeon general established advisory committee on Tobacco which suggested relationship to cancer in writing.
- 1965 Federal Cigarette Labeling and Advertising Act requiring surgeon general's warning on all packs.
- 1971 all broadcast advertising was banned.
- 1990 smoking banned on all interstate buses and domestic airline flights lasting six hours or less.

www.cnn.com/us/9705/tobacco/history (June 2004)

More legislation

- 1992 Synar Amendment passed: federal law that requires all states to adopt legislation that prohibits the sale and distribution of tobacco products to people under age 18.
- 1994 attorney generals of 4 states sued big tobacco. Settlement in Mississippi, Florida, Texas. Recouped millions for smokers medical bills.
- 1995 Bill Clinton announced FDA plans to regulate tobacco, especially sales to minors
- 1998 6.5 billion dollar settlement in Minnesota. Public knowledge of deceit.
- Set back in 1998- Senate rejected McCain bill to raise taxes and change policy

Achievements

- Smoking prevalence rates among adults aged 18 years and older decreased from 42.4% in 1965 to 24.7% in 1997
- 1.6 million deaths were postponed, saving more than 3 million person-years of life

www.CDC.gov June 2004

BUT

- Since 1990 smoking prevalence among adults is virtually unchanged
- Adolescent smoking increased 28.3% from 1991 to 1997
- Second hand smoke is still a big problem

www.cdc.gov (June 2004)

Where do providers fall short?

- Only 15% of smokers who saw a provider in the past year were offered assistance with quitting
- Only 3% were given a follow up appointment to address this topic
- Only 9% of managed care organizations have fully implemented the guidelines for coverage

American Cancer Society, Living Well Tobacco Free (2001)

Smoking Cessation Clinical Practice Guideline, 2000

- Effective treatments exist (psychiatric hook)
- Every patient who uses tobacco should be offered treatment
- Strong dose-response relationship, effectiveness increases with intensity of treatment
- Treatment is insured & clinicians are reimbursed (far from 100%)
- Pharmacotherapy (physical hook)
- Clinically effective and cost effective

Agency for Healthcare Research and Quality, U.S. Department of Health & Human Services

As a society, we are SLOWLY
changing our behavior

- Providers
- Legislators
- Consumers
- Big tobacco (because they have to!)

Weight Loss

Individual Applications

Examples

- “Practical Clinical Behavioral Treatment of Obesity,” by Ingela Melin & Stephan Rossner (2003) refer to the article for Prochaska reference #15
- “The Therapeutic challenge: behavioral changes for long-term weight maintenance,” by Westhoefer (2001)

Westhoefer’s Stages

- Problem consciousness (contemplation)
- Attitudinal change (preparation)
- Behavioral change (Action)
- Behavioral trial (Action)
- Behavioral stabilization (Maintenance)

Westhoefer, “The therapeutic challenge: behavioral changes for long-term weight maintenance,” (date)

Are the programs effective?

- Westhoefer says, yes and no.
 - “Isolated changes of single behaviors will not suffice for long-term success, but more complex changes of many behaviors and perhaps life-style as a whole are necessary for long-term weight maintenance.”
 - Meal rhythm and frequency, quality of food, meal situations, restriction of food
- Melin & Rosner don’t have patient data.
 - But they do feel that they changed the attitudes of the health care personnel. “850 nurses, dietitians and other health care personnel have been educated – overall these participants find their education and supervisions meaningful and valuable.”

Why does this research seem
inconclusive?

Weight Loss

Societal Implications

Levels of Prevention

- Education (little has been done)
 - Fast food healthy choices
 - Public schools
- Treatment
 - For Profit "Diets"
 - Weight Watchers
 - Atkins
 - LA weight loss
- Public Policy & law enforcement
 - Schools: California (has ban in place) & New York
 - 17 states (NY) have "sin taxes" on soda & junk food
 - What if things were different? Will Doritos get sued?

Safer Sex

Individual Applications

?

Abstinence

Safer Sex

Societal Applications

(Because people have sex with somebody else)

ESID

- Experimental Social Innovation and Dissemination (1977) Fairweather & Tornatzky
- Behavior Change Model Variant for Societal implications carried out traditionally by scientists
- "HIV, Sex, and Social Change: Applying ESID Principles to HIV Prevention Research," By Fernandez, et al. (2003)

ESID parameters

- Must address a pressing social issue
- Be guided by humanitarian values
- Include representative of the affected community

Fernandez et al., "HIV, Sex, and Social Change: Applying ESID Principles to HIV Prevention Research," (date)

Why?

- In 1989 68% of all adult/adolescent AIDS cases were of MSM
- Not because they are homosexual, but because of their high risk behavior.

CDC 1990

ESID Principles

- Adoption of an idea with verification of peer support
- "Opinion Leaders"
 - Safe Sex Endorsers
 - Behavior Change Advocates
 - Chosen by bartenders

Results at 2 months

- 25% decrease in unprotected anal intercourse
- 30% decrease in unprotected receptive anal intercourse
- 16% increase in condom use
- 18% decrease in proportion of men with more than one partner

Results after 1 Year

- 65% decrease in unprotected anal intercourse
- 50% increase in condom use

In conclusion

What's in common?

- Ownership of the problem
- Group support
- Program longevity
- "Life Savors"
- Facilitators
- Harm reduction
- No vaccines, limited pharmacology Tx
- Fatality when not adhered to

What is Different?

*Unfortunately,
you can't use a condom in stages*

Complementary Medical Interventions

- Pharmacotherapy
 - Methadone maintenance
 - Nicotine gum, patch, nasal spray, Zyban, clonidine
- Surgery
 - "Stomach stapling" Gastric Bypass Surgery
- Alternative Therapy
 - Acupuncture
 - Hypnosis
 - Herbal Therapy

Changing Behavior of Providers

- Increases ownership of a societal behavior problem
- Shares the burden of the problem behavior
- Validates a behavior as a problem
- Makes a difference