

# Health and Illness Behavior

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## Purpose of Health Behavior Theories

- ▶ Understand why people act as they do (correlates)
- ▶ Pinpoint what you need to know to develop intervention
  - Guide research (hypotheses)
  - Use disciplined approach
  - Keep open mind about mechanisms of change
- ▶ Provide insight into how you can design an intervention

## No Single Dominant Theory

- ▶ Predict power varies in terms of:
  - Unit of analysis (individual vs group)
  - Health problem
  - Type of behavior (one-shot vs. repeated behavior)
- ▶ Familiarity with a variety of theories helps you pick the one that fits best

## Multiple Levels of Influence

- ▶ Intrapersonal - beliefs, attitudes, and personality traits
- ▶ Interpersonal - family, friends, peers
- ▶ Institutional - rules, regulations, informal structures that constrain or promote
- ▶ Community - social networks and norms or standards
- ▶ Public policy - local, state and federal policies and laws

## Focus of Theories Varies

- |                                 |   |
|---------------------------------|---|
| ▶ Cognitive-behavioral          | ▶ Individual and interpersonal                |
| ▶ Interpersonal health behavior | ▶ Focus on social influence                   |
| ▶ Community-level               | ▶ Focus on change process among group members |

## Cognitive-Behavioral Models

- ▶ Focus on individual and interpersonal levels of influence
  - Transtheoretical Model: Stages of Change
  - Health Belief Model
  - Theory of Reasoned Action

## Cognitive-Behavioral Models

- ▶ Behavior is considered to be mediated through cognitions
  - what we know and think affects how we act
- ▶ Knowledge is necessary but not sufficient to produce change
  - motivations, skills and social environment

## Cognitive-Behavioral Theories

- ▶ Transtheoretical model or stages of change theory
- ▶ Health belief model
- ▶ Theory of reasoned action

## Stages of Change or Readiness Theory

- ▶ Originated with work on smoking cessation
- ▶ Readiness to change
- ▶ Change is a process, not an event
  - People move through stages
- ▶ May enter and exit at any point
- ▶ May cycle back and forth

## Stages of Change or Readiness Theory

- ▶ Stages in change process
- ▶ Stage matched interventions
- ▶ Stage matched messages

## Stages

- ▶ Precontemplation
- ▶ Contemplation
- ▶ Preparation
- ▶ Action
- ▶ Relapse
- ▶ Maintenance
- ▶ Termination

## Precontemplation

- ▶ May be aware or informed
- ▶ Have never tried desired behavior
- ▶ Do not plan to do so in the next six months
- ▶ Intervention: Awareness or education

## Contemplation

- ▶ Have never practiced desired behavior
- ▶ Plan to within the next six months
- ▶ Intervention: education

## Preparation

- ▶ Have never practiced desired behavior
- ▶ Have begun making plans to do so
- ▶ Intervention: skills training and practice

## Action

- ▶ Have tried the behavior
- ▶ May continue or relapse
- ▶ Intervention: reminders and reinforcement

## Relapse

- ▶ Stop practicing desire behavior
- ▶ Intervention: reminders and remedial efforts

## Maintenance

- ▶ Practice behavior regularly
- ▶ Do not even contemplate relapse
- ▶ Intervention: reinforcement and praise

## Termination

- ▶ Do not contemplate relapse

## Implications for Public Health Practitioners

- ▶ Change Processes Matched to Stages of Change

TABLE 5.2. PROCESSES OF CHANGE THAT MEDIATE PROGRESSION BETWEEN THE STAGES OF CHANGE.

	Stages of Change				
	Precontemplation	Contemplation	Preparation	Action	Maintenance
Processes		Consciousness raising Dramatic relief Environmental reevaluation	Self-reevaluation	Self-liberation	Counterconditioning Helping relationships Reinforcement management Stimulus control

Note: Social liberation was omitted due to its unclear relationship to the stages.

## Health Belief Model

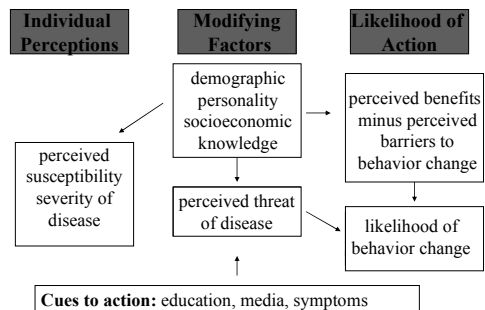
- ▶ Originated in 1950s as attempt to explain low utilization of screening programs
  - Four constructs - fairly good predictor of screening behavior
  - Later additional constructs added to better explain changing habitual behaviors
- ▶ Best fit when behavior or condition evokes health motivation

## Original Constructs in Health Belief Model



- ▶ Perceived Threat
  - Perceived Susceptibility
  - Perceived Severity
- ▶ Perceived Benefits
- ▶ Perceived Barriers

## Components of HBM



## Perceived Susceptibility

- ▶ Chances of getting a condition
- ▶ Acceptance of diagnosis and estimate of susceptibility to illness
- ▶ Application: make perception consistent with actual risk

## Perceived Severity

- ▶ How serious a condition and its sequelae are
  - disability
  - death
  - pain
- ▶ Application: specify consequences of risk and condition

## Perceived Benefits

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- ▶ Efficacy of recommended action to reduce impact
- ▶ Other benefits associated with advised action
- ▶ Application: Clarify positive effects

## Perceived Barriers

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- ▶ Tangible and psychological costs of advised action
- ▶ Other negative aspects of health action
- ▶ Reduce barriers through correction of misinformation, incentives, assistance

## Recent Additions

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- ▶ Cues to Action
  - Strategies to activate readiness to change
  - Application: Provide training, guidance and reassurance
- ▶ Self Efficacy
  - Confidence in one's ability
  - Provide training and guidance in performing action

## Breast Cancer Self Examination

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- ▶ Perceived susceptibility
- ▶ How likely are you to get cancer?
- ▶ Perceived severity
- ▶ How serious would it be if you were diagnosed with cancer?

## Breast Cancer Self Examination

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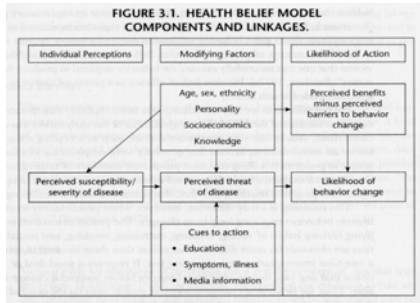
- ▶ Perceived benefits
- ▶ What benefits do you gain from being screened annually?
- ▶ Perceived barriers
- ▶ What barriers must you overcome to be screened annually?

## Breast Cancer Self Exam

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- ▶ Do you remember?
  - What can you do to remember to be screened regularly?
- ▶ How confident are you in your ability to detect cancer?

## Health Belief Model Components



## Theory of Reasoned Action

Attitude + Subjective Norm = Behavioral Intention → BEHAVIOR

Attitude → shaped by belief about the consequences of the behavior

Subjective Norm → influenced by perceptions of significant others regarding the behavior

Behavioral Intention → Primarily responsible for a person's behavior

## Intentions



- ▶ Likelihood of performing the behavior
- ▶ Implications:
  - provide opportunities for goal setting
  - making the commitment to change

## Attitude



- ▶ A predisposition toward the behavior
- ▶ Based on behavioral belief and evaluation

## Behavioral Beliefs



- ▶ Anticipated consequences
- ▶ Perceived benefits and barriers

## Evaluation



- ▶ Value attached to behavioral outcome

## Subjective Norm



- ▶ Normative belief
  - Belief about whether person approves or disapproves
  - Perception of what other people think you should do
- ▶ Motivation to Comply
  - How important it is to comply

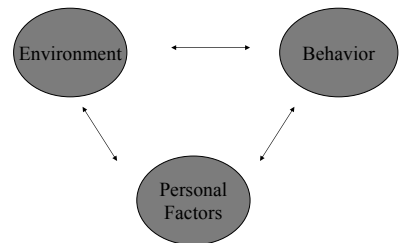
## Implications

- ▶ Assess each factor so can enhance anticipated consequences
- ▶ Change social norms and motivation to comply
- ▶ Get people to make commitment to change

## Theories of Interpersonal Health Behavior

- ▶ Focus on social influence
- ▶ Also include individual or intrapersonal factors
  - perceptions of environment
  - personal characteristics

## Social Cognitive Theory



## SOCIAL (COGNITIVE) LEARNING MODEL



- ▶ Reciprocal Determinism
  - Behavior is determined by interaction of personal and environmental factors
  - Influence simultaneously -constantly interacting between behavior, personal and environmental factors

## Observational Learning



- ▶ People can learn from watching others
- ▶ Vicarious experiences
- ▶ Role models
- ▶ Ability to acquire skills
- ▶ Implications: Role models are important

## Skills or Behavioral Capability

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- ▶ Knowledge, mastery of skills
- ▶ What skills do you need to follow special diet?
- ▶ Implications: devote time to skills acquisition and practice

## Outcome Expectations

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- ▶ Beliefs about likely results of new behavior
  - Previous experience
  - Observation
  - Persuasion by Others
  - Physiological Arousal

## Outcome Expectations

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- ▶ Application: create positive expectations
  - incorporate information about likely results of behavior in advice
  - Model positive outcomes of healthful behavior

## Anticipated Consequences

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- ▶ Benefits: What you will gain
- ▶ Costs: What you must give up
- ▶ Implications: Must offer personally meaningful advantage

## Self Efficacy

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- ▶ Confidence about performing an activity
  - Personal assessment of accomplishments
  - Observation and comparison with others
  - Expectations and norms set by others

## Self Efficacy (Cont'd)

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- ▶ Bandura considers this most important determinant
- ▶ Impacts how much investment people make in changing
- ▶ Impacts level of performance



## Self Efficacy (Cont'd)

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- ▶ Implications: must enhance self efficacy
  - point out strengths
  - use persuasion and encouragement
  - approach behavior change in small steps

## Reinforcement

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- ▶ Punishment less effective than positive reinforcement
- ▶ External - use incentives cautiously
  - Can decrease internal motivation or intrinsic interest
  - May offend - needs to be appropriate and significant

## Self Control

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- ▶ Goal setting
  - should be specific and attainable
  - influenced by self efficacy
- ▶ Monitoring performance
- ▶ Comparison of performance outcome and goals
- ▶ Self-reward

## Management of Emotional Arousal

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- ▶ Excessive anxiety
  - hurts performance
  - can't pay attention to external cues and messages
- ▶ Cope with
  - psychological defenses
  - stress management
  - problem restructuring
- ▶ Implications: Teach management skills



## Reciprocal Determinism Summarized

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- ▶ Relationship between environment, personal characteristics and behavior
- ▶ Previous behavior influences by
  - social environment and expectations
  - internal expectations and confidence
- ▶ Success in changing also influenced by
  - self control
  - management of emotional arousal

## Example: Physical Exercise

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- ▶ What is role of :
  - Observational learning
  - Behavioral capacity
  - Outcome expectations
  - Anticipated consequences
  - Self efficacy
  - Reinforcement
  - Self control
  - Management skills

## Practical Implications

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- ▶ Multifaceted programs - reciprocal determinism
- ▶ Specific skills training
- ▶ Small, realistic steps likely to produce success
- ▶ Time for guided practice
- ▶ Other forms of positive feedback

## Practical Implications (cont)

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- ▶ Make messages personally relevant
- ▶ Often need variety of appeals and strategies
- ▶ Often must combine new information with skills, self efficacy and reinforcement strategies

## Community-Level Models

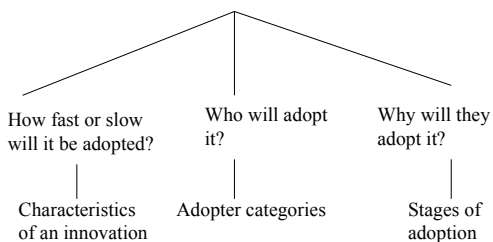
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- ▶ Ecological Models
- ▶ Community Organization
- ▶ Diffusion Theory

## Diffusion Theory ---

- ▶ Components in Diffusions Process
  - Innovation - idea, practice or object perceived as new
  - Change agent - person promoting idea
  - Adopters - people for whom idea is new
  - Information Channels
  - Time
- ▶ Rich literature (see Everett Rogers)

## Diffusion of an Innovation ---



## Stages of Adoption

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- ▶ Awareness
- ▶ Interest
- ▶ Trial
- ▶ Decision
- ▶ Adoption

## Adopter Categories



- ▶ Innovators or gatekeepers
- ▶ Early adopters
- ▶ Early majority
- ▶ Late majority
- ▶ Laggards

## Innovators



- ▶ Venturesome
- ▶ Cosmopolitan: New ideas leads them out of a local circle of peers
- ▶ Serve as a gatekeeper in the flow of new ideas
- ▶ 2.5% of population

## Early Adopters



- ▶ More integrated part of the local social system
- ▶ Opinion leaders - greatest influence on people in system
- ▶ Their adoption decreases uncertainty
- ▶ 13.5% of population

## Early Majority



- ▶ Adopt just before the average member of a system
- ▶ Interact frequently with their peers
- ▶ Not opinion leaders
- ▶ Important link with rest of population
- ▶ Deliberate decision making
- ▶ 34% of population

## Late Majority



- ▶ Adopt just after the average member of a system
- ▶ Skeptical of change; wait for others to try first
- ▶ Adoption may be economic necessity
- ▶ Adoption may result from peer pressure
- ▶ 34% of population

## Laggards



- ▶ Last to adopt
- ▶ Traditional, local viewpoint, past orientation
- ▶ Some are near isolates in social system
- ▶ suspicious of innovations and change agents



## Characteristics of an Innovation

- ▶ Compatibility
- ▶ Complexity
- ▶ Relative advantage
- ▶ Trialability
- ▶ Observability

## Relative Advantage

- ▶ The degree to which an innovation is perceived as better than alternative or competition
- ▶ Implications:
  - Point out unique benefits
  - Diet: tastes better, more nutritious, less fattening

## Compatibility

- ▶ Extent to which is perceived as consistent with existing values, norms and beliefs
- ▶ Implications:
  - Tailor innovation to fit values and norms
  - Diet: looks and tastes right, served at right time, beliefs about nutrient content is consistent with previous notions

## Complexity

- ▶ Extent to which it is perceived as difficult to understand or use
- ▶ Implications:
  - Make look easy to master and understand
  - diabetes exchange lists

## Trialability

- ▶ Extent to which may be implemented on trial basis
- ▶ Experimented with before a commitment to adopt
- ▶ Implications
  - provide opportunities to try without major investment
  - sample packs

## Observability

- ▶ Extent to which results are visible
- ▶ Implications:
  - assure visibility of results
  - monitor impact of change

## Summary

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- ▶ Theories are:
  - Complementary
  - Help us identify possible predictors of change
  - Guide Formative Research
  - Later help us select most effective strategies