The Health Belief Model

Health behavior =
• belief that a health threat exists + the belief that action will lessen that threat

Health threat =
• personal vulnerability + severity of consequences
Belief that action will reduce threat =
• efficacy belief + cost/gain belief

The Theory of Reasoned Action

• Behavior (intentions) = attitudes towards the behavior + subjective norms
• Attitudes = belief that behavior will produce a certain effect + value of the outcome
• Subjective Norms = beliefs about what other people think re: behavior + motivation to listen to other people’s advice
Theory of Planned Behavior

Theory based on assumption that people:
1. decide on intentions prior to action
2. intentions are best predictors of behavior
   • Attitude regarding the behavior
   • Subjective norm
   • Perceived behavioral control
   • Direct and indirect predictor of behaviour

Control Beliefs and Health Behavior

Self-efficacy
• individuals will tend to pursue tasks that they believe they can accomplish & avoid those that are perceived as exceeding their capabilities
   – increases with successful completion of tasks
   – decrease with failure
• based on social learning theory - reinforcement plays a sig. role in its acquisition

Procrastination and health intentions

Why is procrastination associated with few health promoting behaviors?
– Intentions to perform but failure to act?
– Avoidance of intention formation and corresponding lack of behaviors?

Possible factors associated with intention formation
– self-efficacy
– consideration of future consequences

Method

Sample
• Undergraduate sample, N = 182 (121 females, 61 males)
  • Mean age = 21.06 years, SD = 4.45

Procedure - 3 parts
1) Health and personality measures
2) Illness experience writing task
   - recall and write about bothersome illness experience
   - generate list of preventive actions
   - rate intentions to perform one action listed
3) Health beliefs and CFC measure

Measures
<table>
<thead>
<tr>
<th>Trait procrastination</th>
<th>Consideration of future consequences</th>
<th>Health specific self-efficacy</th>
<th>Intentions to perform health behavior</th>
</tr>
</thead>
</table>

Results

<table>
<thead>
<tr>
<th>Variables</th>
<th>CFC</th>
<th>Self-efficacy</th>
<th>Health behavior intentions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Procrastination</td>
<td>-.37**</td>
<td>-21</td>
<td></td>
</tr>
<tr>
<td>CFC</td>
<td>---</td>
<td>.31**</td>
<td>28*</td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>Health behavior intentions</td>
<td>---</td>
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<td></td>
</tr>
</tbody>
</table>

*p < .05, **p < .01

Table 1. Zero-order correlations between procrastination and health-related variables

• types of health behaviors: wellness & care-seeking

Mediation analysis

Figure 2. Revised mediational model of the relationship between procrastination and health behavior intentions. Values reflect standardized regression coefficients.

Conclusions

• Procrastinators may perform fewer health promoting behaviors because their intentions are weaker
• Weaker intentions to perform health promoting behaviors may be due to lower self-efficacy
• Awareness of consequences of not performing behavior, but intentions still weak
Changing Health Habits: Some Caveats

- Attitudinal approaches don’t explain long-term behavior change very well
- Communications can provoke irrational, defensive reactions
- People may distort health-relevant messages
- Thinking about disease may produce a negative mood.
- Unrealistic optimism is resistant to feedback.
- Some behavioral styles are not conducive to performing health protective behaviors

The Stages of Change Model

Prochaska and DiClemente:
- Transtheoretical Model of Change
- Model of intentional change
- Often applied to smoking cessation

- Stages
  - Precontemplation
  - Contemplation
  - Preparation
  - Action
  - Maintenance
- Type of help needed depends on stage
Figure 2. Spiral of change
From Prochaska, DiClemente & Norcross, 1992, p1104

Transtheoretical model of change

The Relationship between Stage and both Self-efficacy and Temptation

Are you considering making healthy changes soon?
Do you intend to...
Participate in a survey study and receive a $15 gift card to use at the Devonshire Mall.
Find out if you qualify here.
We are looking for people who want to make healthy changes in the near future.

Recruiting people in the contemplation/planning stage of change
•Follow-up in 6 mos. to see who made their change(s), who did not, and what factors were predictive of success/failure
Media Campaign: ParticipACTION

• 1972-2000 sponsored by Health Canada
• Educational multimedia campaign launched to increase physical activity, exercise and healthy eating
• Included the popular “Body Break” segments
• Targeted a wide range of health and social issues that could be positively impacted by regular physical activity
• Vitality project conveyed 3 key messages:
  - eating well
  - being physically active
  - feeling good about yourself.

NOW: ParticipACTION is Back!

FEB. 19, 2007:

• Canada’s New Government will provide $5 million over two years to support the renewal of ParticipACTION.
• Combined with a new website, HealthyCanadians.ca, the federal government is hoping these initiatives will help combat Canada’s rising levels of obesity.

Venues for Health Habit Modification: Conclusions

• Important to seek methods that:
  - Reach the most people
  - Are the least expensive
• Challenge will be integrating knowledge
  - of how people change their health habits
  - with macro-level polices of national, provincial, and private health care agencies.

Chapter 4: Health Enhancing Behaviours
Exercise: Overview

- Aerobic exercise – sustained exercise  
  - that stimulates and strengthens the heart and lungs  
  - that improves the body's utilization of oxygen.
- High-intensity, long-duration  
  - Bicycling  
  - Jogging, running  
  - Jumping rope  
  - Swimming

Benefits of Exercise

Effects on Psychological Health
- Decreases stress  
  \[ \uparrow \text{Exercise} \Rightarrow \uparrow \text{self esteem, self worth} \]
- Exercise & cognitive functioning?
- Exercise & depression, anxiety?

Effects on Physical Health
- Increases in cardiovascular fitness and endurance  
- Increased longevity
Longitudinal research suggests that exercise reduces the risk for mortality from all causes, but esp. CD & cancer
- reduces poor health habits such as smoking & alcohol consumption  
- exercise may protect both pre-& post menopausal women from bone density loss = \[ \downarrow \text{risk osteoporosis} \]
- But like stress exercise produces the release of adrenaline - so why is it not harmful?

Exercise: Determinants of Regular Exercise

- Exercise schedules are usually erratic  
  - Lack of time and stress undermine good intentions.  
  - What % of people who initiate a voluntary exercise program are still doing it after 6 months?
- Individual Characteristics  
- Characteristics of the Setting  
- Characteristics of Intervention Strategies
Cancer-Related Health Behaviors: Sunscreen Use

- Skin Cancer: 60% increase in 10 years in Canada
- Skin cancer is the most common cancer in Canada, accounting for about one-third of all new diagnosed cancers
- Excessive exposure to ultraviolet radiation.
- Problem with Sunscreen Use

Cancer-Related Health Behaviors: Sunscreen Use

- Best predictor of sunscreen use is type of skin
  - burn only, burn then tan, tan without burning
- Factors influencing sunscreen use
- Most effective educational intervention

Maintaining Healthy Diet: Overview

- Controllable risk for many causes of death
- Fruit consumption rose on average to 72 kilograms in 2002, 19 per cent more than a decade earlier
- Unhealthy eating contributes to 300,000+ deaths per year
- Dietary change is critical for those at risk for ......
Canada’s Food Guide

- First food guide developed during WWII
- Overconsumption of food was not a major problem. WHY?
- After the war the incidence of chronic degenerative diseases rose
- A newly revised guide has just been released (2007).

Maintaining a Healthy Diet: Resistance to Modifying Diet

- Do people switch to healthier diets more often to improve appearance or to improve health?
- Maintaining change is difficult – WHY?
- Long-term monitoring and relapse prevention is critical
- Helpful factors

Maintaining a Healthy Diet: Interventions to Modify Diet

- Individual interventions
- Family interventions
- Community interventions
- Transtheoretical Model of Change - Different interventions are required for each stage
  - Precontemplation
  - Contemplation
  - Preparation
  - Action
  - Maintenance

Weight Control: Why Obesity is a Health Risk

- Risks of Obesity
  - Links with other risk factors, such as smoking
  - Increases risks during surgery, anesthesia administration, and childbearing
  - Links to chronic diseases associate obesity with early mortality
- Where the Fat is
  - Particular risk to "apples" rather than "pears" (fat localized in abdomen)
  - Yo-Yo dieting (loss and regain) affects abdominal fat.
Weight Control: Why Obesity is a Health Risk

Obesity – excessive body fat
- Women: fat should be 20% to 27% of body tissue.
- Men: fat should be 15% to 22% of body tissue.

Global epidemic of obesity – WHY?

Super Size Me

- eats only McDonald's fast food, three times a day, every day, for thirty days – and stops exercising regularly
- documents physical and psychological effects
- Among these are mood swings, sexual dysfunction, and nearly catastrophic liver damage

Health Risks and Body Weight

Some health problems associated with body weight

Overweight and obesity
- Type 2 diabetes
- Dyslipidemia
- Hypertension
- Coronary heart disease
- Gallbladder disease
- Obstructive sleep apnea
- Certain cancers

Underweight*
- Undernutrition
- Osteoporosis
- Infertility
- Impaired immuno-competence
- Alzheimers

Source: Health Canada
### Weight Control: Stress and Eating

- 50% eat more when under stress
  - Women more likely to eat more under stress
  - Stress removes self-control in dieters/obese
  - Choose foods containing more water, “chewier”
  - Choose salty, low calorie foods
  - Negative emotions – sweet, high-fat foods
- 50% eat less when under stress
  - Men, compared to women, eat less under stress
  - Non-dieting, non-obese suppress hunger cues

### Eating Disorders

- Not new disorders
- Anorexia nervosa (AN) first described in 1694
- Bulimia nervosa (BN) first identified in 1892
- Usual age of onset is adolescence or early 20s.
- 90% or more are females.
- Prevalence of AN is 0.5% to 1.0%.
- Prevalence of BN is 1.0 to 3.0%.
- Misperception: Thin = Healthy

#### Eating Disorders: Anorexia

- Anorexia Nervosa – an obsessive disorder amounting to self-starvation
  - Dieting and exercising till body weight is grossly below optimum level
- 10-15 times more frequent in women than men
- Evidence for genetics is inconsistent
- Family variables include the child being over-controlled by parents
- Sociocultural risk factors

#### Eating Disorders: Bulimia

- An eating syndrome characterized by alternating cycles of binge eating and purging through such techniques as
  - Vomiting
  - Laxative abuse
  - Extreme dieting
  - Drug or alcohol abuse
- Binge eating – usually the person is alone and feels out of control
Eating Disorders: Bulimia

- Bulimics – typically normal or overweight
- Issues of control
  - Binge phase – out of control
  - Purge phase – attempt to regain control
- Control of eating shifts from internal sensations to cognitively based decisions
- Genetic basis: bulimia runs in families
- First step to help: Get treatment

Take home message....

- Maintaining a healthy weight means keeping within a healthy weight range
  - “range” may be very individual depending on genetic predispositions, metabolism, set point, etc.
    - Not overweight
    - Not underweight
- There are health consequences for being at the extremes outside of this range, either way.