Slide 1: Stress, Coping, & Health

- Medical Model of Illness—An outdated model?
  - Built around the belief that single causative agents are responsible for illness

- 1900: Leading Causes of Death (Figure)
  - Contagious Diseases:
    - Tuberculosis  Pneumonia  Influenza (the flu)
    - Measles  Scarlet Fever  Diphtheria

- What is common to these diseases
  - Caused by singular infectious agents
  - Can be treated by singular treatments (e.g., antibiotics)

Slide 2: Medical Model Outdated? (cont.)

- 1998: Leading causes of Mortality
  - Chronic Diseases:
    - Heart Disease  Cancer  Stroke

- What is common to Chronic Diseases?
  - Come on slowly
  - Cause and progression cannot be pinpointed on one factor.

- Psychosomatic Medicine—1930’s
  - A clinical outlook that observes how social and psychological factors influence the course of disease (cancer, hypertension etc.)

Slide 3: The Biopsychosocial Model etc.

- The Biopsychosocial Model of Medicine, (Engel, 1962)
  - Physical illness is caused by a complex interaction of biological, psychological, and sociocultural factors

- Health Psychology—The relationship of psychosocial factors (e.g., stress of various types) to the maintenance of health and prevention of illness/death.
Slide 4: Defining Stress

- Stress: conditions that tax and/or are perceived as threatening to our well-being.
  (a bit different definition from the book)
- A Popular Model of Stress: Life Change
  Social Readjustment
- Holmes & Rahe (1967)- noticed many of their sick patients have experienced traumatic changes recently.

Slide 5: Life Change Stress & SRRS

- Social Readjustment Rating Scale
- Score yourself
- Sum all points
- <150 pts: less than 1/3 chance of major illness in next year.
- 150-300 pts: 50% chance of major illness in next year.
- 300+ pts: high probability of (>75%) chance of major illness
- Newer inventories- measure both major life events and “daily hassles”

Slide 6: Life Change Stress Models-Problems

- Problems with Life Events Inventories
  - all change treated as harmful
  - good change not seen as “healthy” (i.e. new job)
  - personal Appraisal not factored into model
- Appraisal: Particularly Important~
  - Richard Lazarus--- how can an event be stressful if we don’t see it as a threat?
  - Only “bad” “threatening” conditions which hurt us.
- Figure
Slide 7: Stress and Performance

- The Inverted-U Hypothesis
  - Arousal (stress) x Performance Relationships
  - HOWEVER...as task complexity increases “optimal arousal” must be less
- Three Tasks ~ complexity, arousal performance
  - Low complexity: 40 yard dash
  - Moderate Complexity: Typing?
  - High Complexity: Final Exam in Calculus?

Slide 8: The Physiology of Stress ~ Selye

- Film Clip: The Brain Series #29 (Emotions, Stress and Health)
- Stress as a physiological event- “wear & tear”
- Hans Selye- father of stress medicine.
  - Patients demonstrated highly similar syndrome of effects (e.g., BP problems, immune problems, High sympathetic nervous system arousal)
- 1929: “just being sick” syndrome
- 1940(approx): Called this syndrome “STRESS”

Slide 9: Selye, Nonspecificity & G.A.S.

- Stress Activation and Illness:
  - The General Adaptation Syndrome ~ Selye
  - Alarm - first response to a stressful condition
  - Resistance - martialing of energy reserves to meet the demands of a chronic stressor
  - Exhaustion - “weak link” cracks--- disease/death
- Nonspecificity
  - Selye noticed this response pattern to a variety of (physical/psychological) stressful stimuli (stressor) appeared to generate the same physiological responses
**Slide 10: Stress Pathways**
- 2 Main Pathways of Response
- Fast On/Fast Off - Sympathetic Axis
  - Electrochemical conduction of information
  - Epinephrine (EPI) & Norepinephrine (NE)
- The Neuroendocrine Axis: slower on/slower off
  - Turned on by hormonal section into circulation of the blood: cortisol
  - Same effects as sympathetic axis
  - Takes much longer (to turn off)
- Physiological Effects (figure)

**Slide 11: Stress, Personality and Health**
- Psychosomatic Disease - Disease whose course is affected by stress or other psychosocial components
- Friedman & Rosenman: Stress-prone personalities
  - The story of Type A personalities (scale on overhead)
- Characteristics:
  - Neurotic competitiveness
  - Highly impatient/time conscious
  - Multiple jobs at one time
  - Self-focused conversation
  - Finish sentences for you
  - Easily irritated/quick to anger

**Slide 12: Stress Resistant Personalities**
- Type B: relatively relaxed, intracompetitive, little anger or hostility
- The Hardy Personality (Kobasa)
  - Commitment (sense of purpose, direction in life)
  - Control (general feel in control of self, life decisions)
  - Challenge (change is welcomed and seen as natural)
- Stress Prone vs Resistant Personality and Illness
  - Type A: 6x more likely to develop CHD
  - Hardy: 4x less risk of major life illness during stressful times
Slide 13: Coping Styles: Dealing w/ Stress

- Emotion Focused Coping - deal with feelings of stress rather than source of stress
  - self-indulgent coping: smoking, eating, substance abuse
  - aggression: displacement of emotion on other with intent to harm
- Problem-Focused (Active) Coping - active and healthful efforts to deal with stressful conditions
  - direct/planful confrontation
  - physical preparation for stressor
- Learned helplessness (Seligman)
  - Passive behavior produced by exposure to uncontrollable stressful stimuli
    - Film Clip: The Brain, Module #28

Slide 15: Stress Moderation & Management

- Moderators of Stress:
  - Social Support Networks
  - Optimistic Style
- Stress Management
- Relaxation Response (Benson)
  - quiet setting
  - mental device
  - object of focus
  - comfortable position
- Humor - release of “pent-up” emotion (class activ)
Brain-body pathways in stress. In times of stress, the brain sends signals along two pathways. The pathway through the autonomic nervous system controls the release of catecholamine hormones that help mobilize the body for action. The pathway through the pituitary gland and the endocrine system controls the release of corticosteroid hormones that increase energy and ward off tissue inflammation.

The Human Stress Response

The General Adaptation Syndrome

Arousal - Performance Curves

Figure 13.6

Back
Changing patterns of illness. Trends in the death rates for various diseases during the 20th century reveal that contagious diseases (shown in blue) have declined as a threat to health. However, the death rates for stress-related chronic diseases (shown in red) have remained quite high. The pie chart (inset) shows the results of these trends: three chronic diseases (heart disease, cancer, and stroke) account for 61.9% of all deaths.

The Biopsychosocial Model

Social Readjustment Rating Scale

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<th>Rank</th>
<th>High value</th>
<th>Low value</th>
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<th>Low value</th>
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