

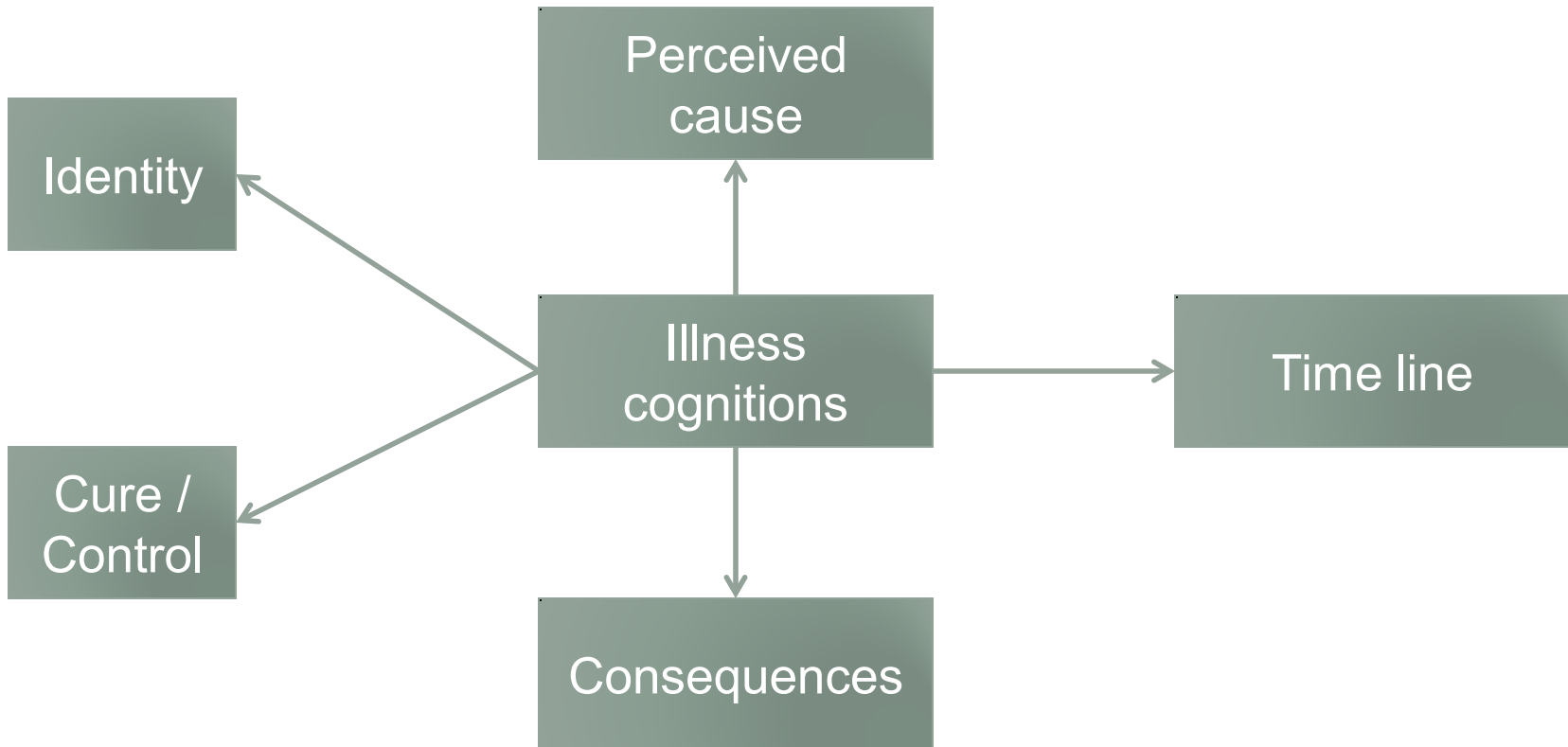
# Today

- The process of illness and illness cognitions
  - Illness cognitions
  - Stress
  - Being ill – Pain

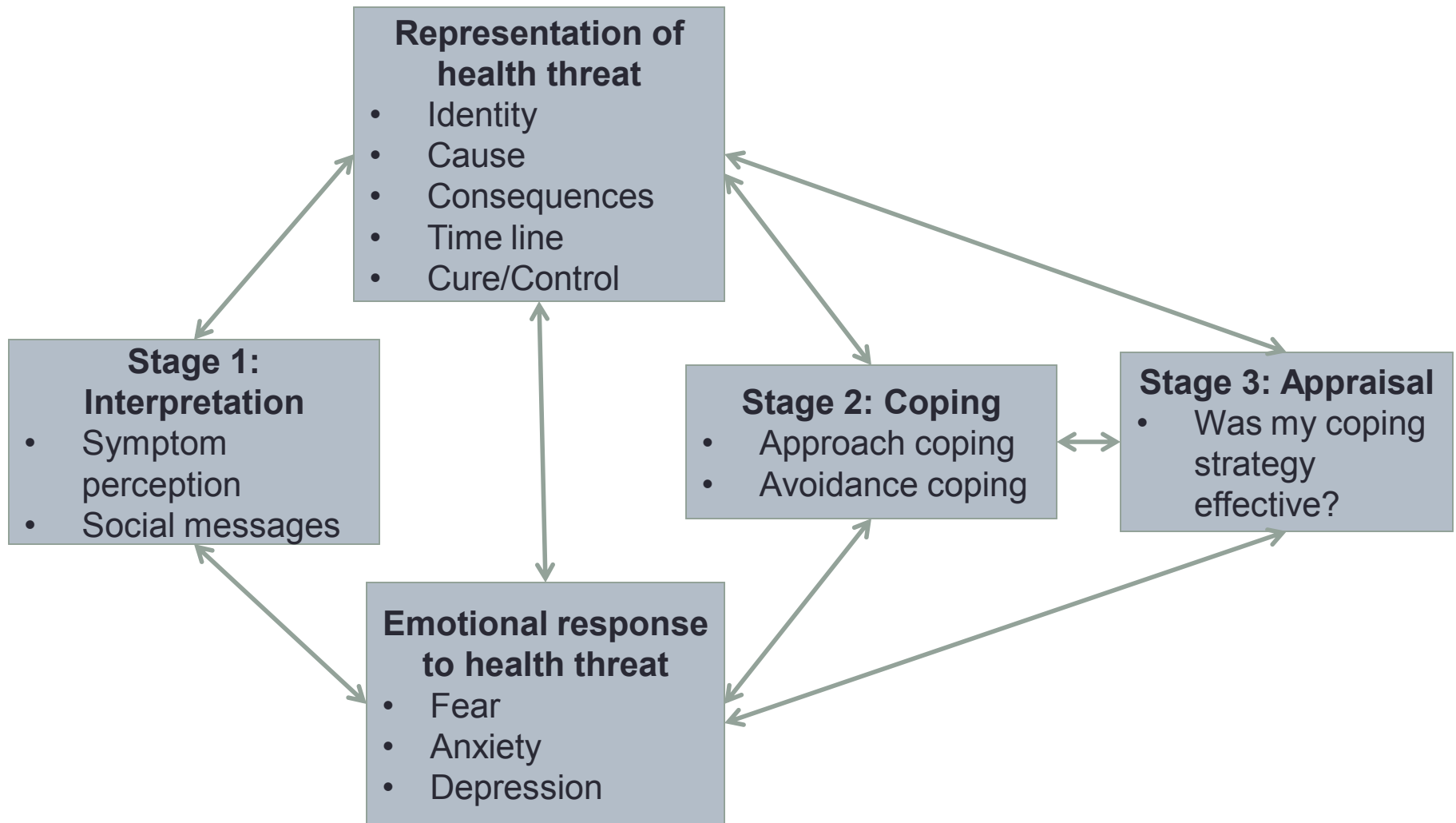
# Illness Cognitions

- Leventhal et al. (1980)

- A patient's own implicit common sense beliefs about their illness
- Provide schema for coping with illness, understanding their illness, warning signs



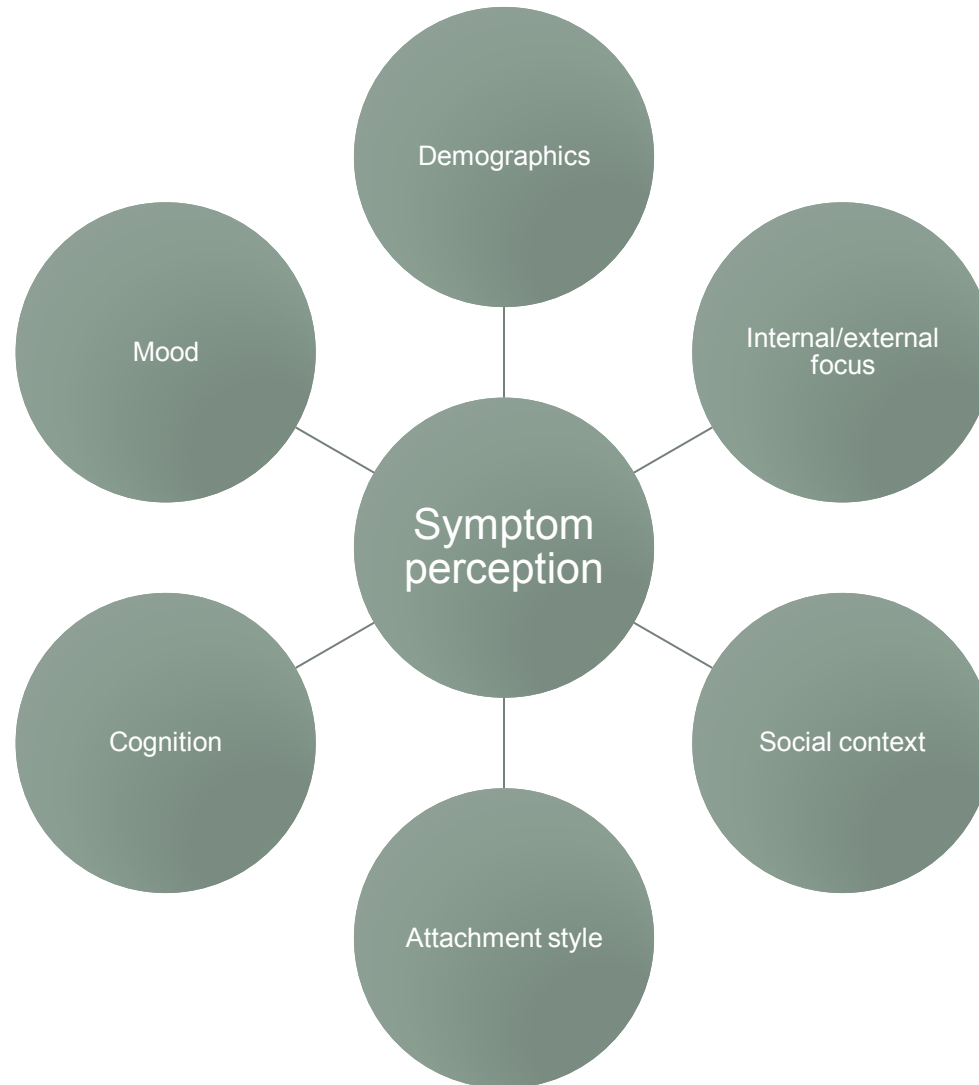
# Self-Regulatory Model of Illness Behavior



# Symptom Perception

- Discuss
  - Symptoms are more than just a sensation.
- What influences symptom perception?
  - Draw a model

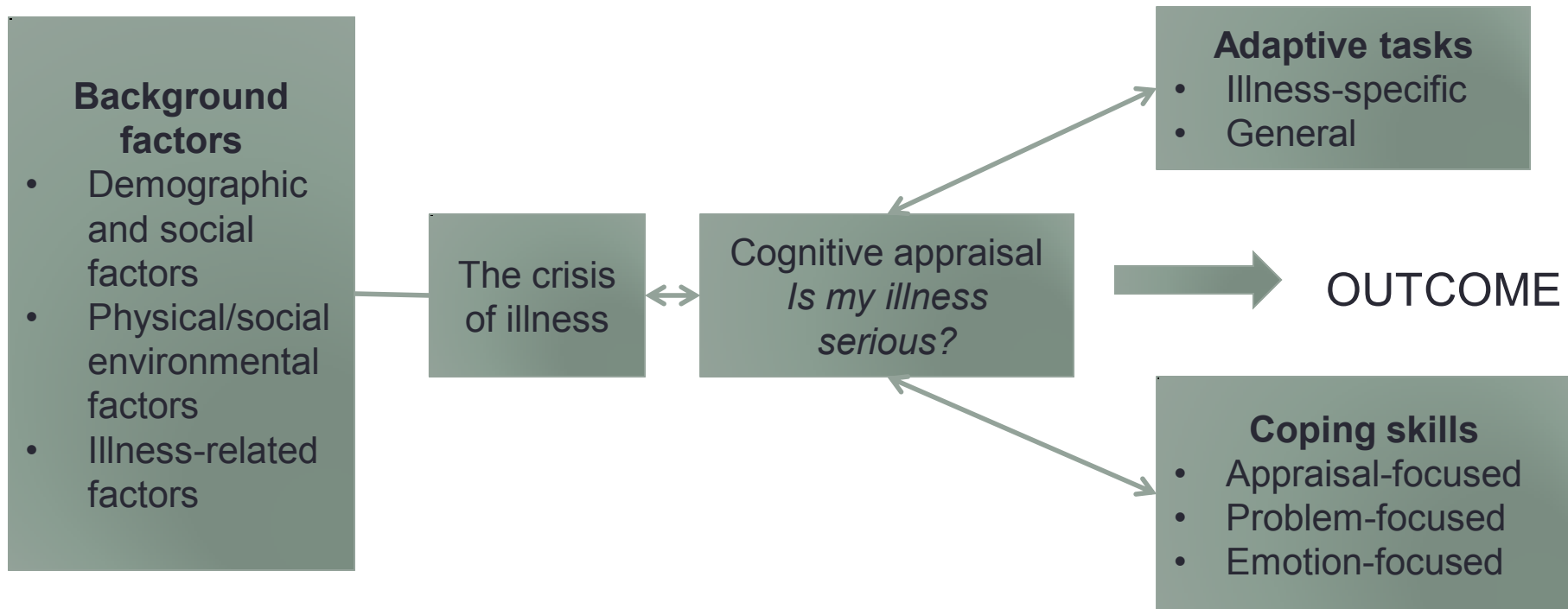
# Symptom Perception



# Coping

- Illness as a crisis (Moos & Schaefer, 1984)
  - Changes in identity
  - Changes in location
  - Changes in role
  - Changes in social support
  - Unpredicted event
  - Insufficient or unclear information about illness
  - Decision needed quickly
  - Ambiguous meaning
  - Limited prior experience
- Coping as a process (Moos & Schaefer, 1984)
  - (1) Cognitive appraisal    (2) Adaptive tasks    (3) Coping skills

# Coping with the crisis of illness



# Adjustment to illness

- Theory of Cognitive Adaptation
  - Search for meaning “*I know what caused my illness*”
    - Attribution Theory (Weiner, 1986)
      - Taylor et al. (1984)
        - 95% of women with breast cancer offer explanation for their cancer
          - 41% stress; 32% carcinogens such as birth control; 26% genetics; 17% diet; 10% injury to breast
      - Taylor (1983)
        - >50% women said that cancer led to reappraising their life
          - Increased self-knowledge; Self-change; Change in priorities
  - Search for mastery “*I can control my illness*”
    - Believing that illness is controllable
  - Process of self-enhancement “*I am better of than a lot off people*”
    - To improve self-esteem
  - Developing illusions
    - Positive interpretations of reality, benefit finding



# Post-Traumatic Growth

- Experience of positive growth following illness involving transformation
- Tedeschi & Calhoun (2004, 2006)
  - Perceived changes in self
  - Closer family relationships
  - Changed philosophy in life
  - A better perspective in life
  - Strengthened belief system
- Hefferon et al. (2009)
  - Reappraisal of life and priorities
  - Trauma equals development of self
  - Existential re-evaluation
  - New awareness of the body

# Discussion

- Cormio (2017)
  - PTG in cancer

# Videos

- <https://www.youtube.com/watch?v=YY3d4dyFRog>
- Harvard Innovation Lab talk
- <https://www.youtube.com/watch?v=oPriBJZah5Y>
- [https://www.youtube.com/watch?v=kVZLR\\_rxjE](https://www.youtube.com/watch?v=kVZLR_rxjE)

# Stress

- The response to events that are challenging or threatening
- Involves biochemical, physiological, behavioral, and psychological changes
- Acute stress versus Chronic stress
- Distress versus Eustress

# Stress models

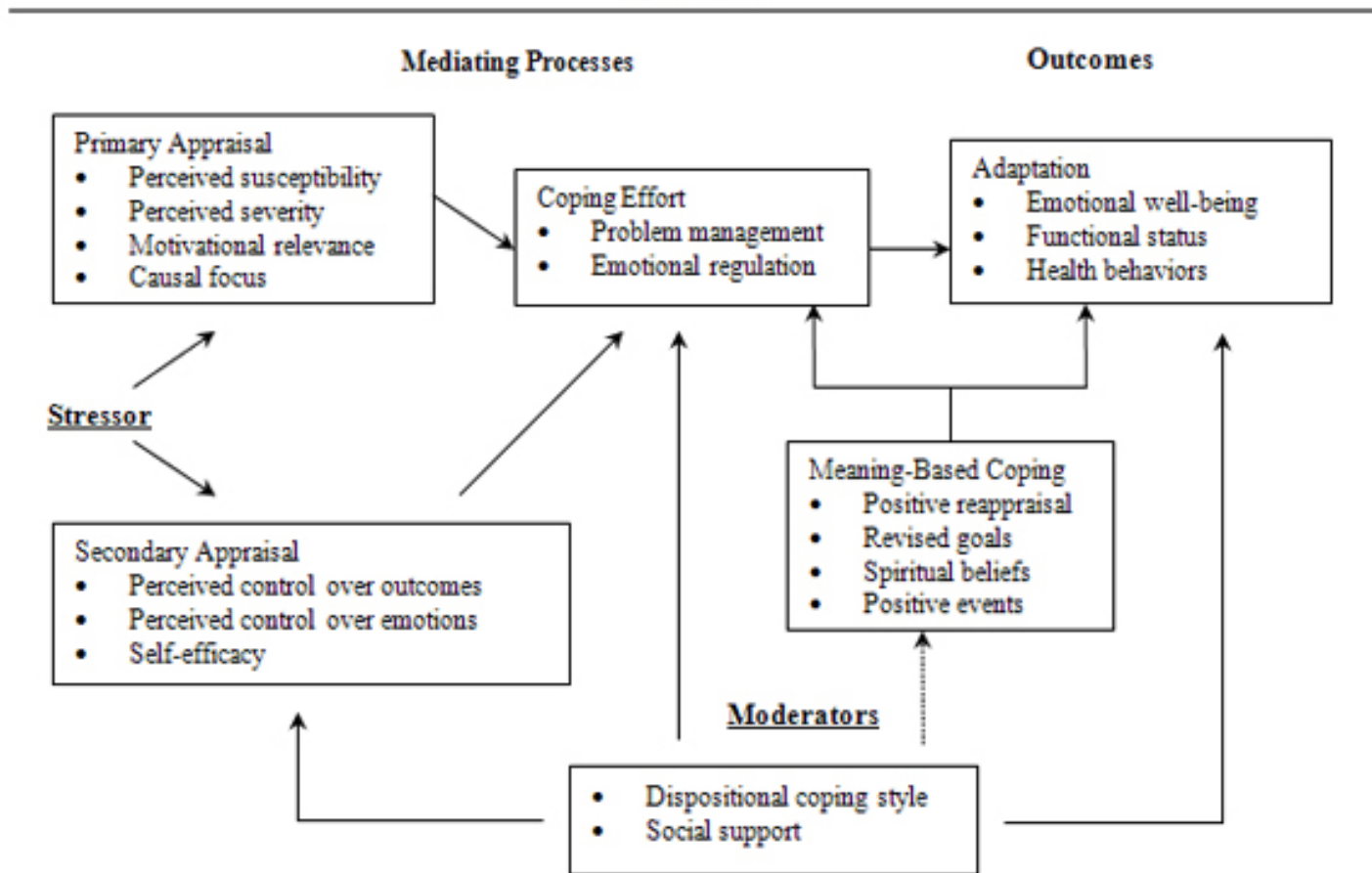
- Fight-or-flight model (Cannon, 1932)
  - Stress as response to external stressors, predominantly physiological (mostly adaptive but could result in medical problems)
- General adaptation syndrome (Selye, 1956)
  - Stress as process: (1) alarm (mobilization to meet or resist stressor); (2) resistance (coping, attempts to reverse the effects of alarm); (3) exhaustion (coping exhausted, resistance unsuccessful)
- Both models view individual as automatically responding to stressors (little consideration of individual variability)
- Assume consistent physiological response to stress
- Individuals seen as passive in responding to the external world

# Stress models

- Life events theory (Holmes & Rahe, 1967)
  - Measuring life experiences (from severe like death of spouse to moderate like child leaving home for college to minor such as vacation)
  - Life experiences as predictors of health outcomes or death (e.g., Phillips et al., 2008)
- Does not take into account individual's rating of event
- Retrospective assessment
- Life experiences may interact
- Series of life experiences
- Short-term versus long-term stressors

# Transactional model of stress (Lazarus, 1975)

FIGURE 10.1. DIAGRAM OF TRANSACTIONAL MODEL OF STRESS AND COPING.



# Stress - Appraisal

- Appraised as more stressful
  - Salient events
  - Overload
  - Ambiguous events
  - Uncontrollable events
- Protective factors
  - Self-efficacy
  - Hardiness (self-control)
  - Mastery



# Physiological basis of stress

- Sympathetic activation
  - Increased catecholamine production (adrenalin, nonadrenalin/epinephrine, norepinephrine)
  - Increased blood pressure, heart rate, sweating, pupil dilation = arousal....negatively impacts immune function
- Hypothalamic-pituitary-adrenocortical (HPA) activation
  - Increased production of corticosteroids (cortisol) – impacts management of carbohydrates store stores, leads to inflammation, and impacts immune function
- Stress reactivity, recover, resistance
  - Varies between people (some due to differences in appraisal but also regardless of appraisal)
  - Gender differences (men more reactive)
  - Allostatic load (McEwan & Stellar, 1993)

# Measuring stress

- Physiological measures
- Self-report measures
  - Life events
  - Perceived stress (Perceived Stress Scale; Cohen et al., 1983)
  - Daily hassles
- Each measure has pros and cons
- Choice depends on purpose of measurement and research questions asked

# How does stress impact health?

- Discuss
  - Does stress cause illness? How?

# How does stress impact health?

- Chronic process
- Acute process
- Atherosclerosis, thrombogenesis
- Demand on CV system
- Immune system
- Changes in behavior (health behaviors, accidents)
- Effects depend on
  - Behavior (exercise)
  - Coping (avoidance vs. approach, problem-, emotion-focused)
  - Social support
  - Personality
  - Control

# Stress and health

- <https://www.youtube.com/watch?v=RcGyVTAoXEU>

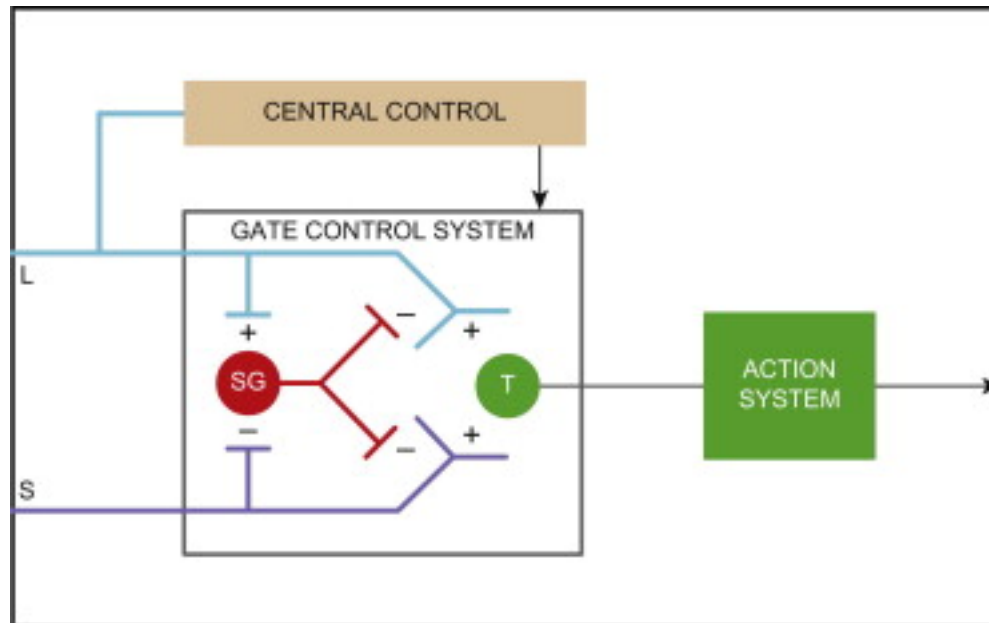
# Being III - Pain

- Sensation versus perception
- Feedback about the body
- Warning sign
- Triggers help-seeking behavior
- Has psychological consequences (fear, anxiety)
- Acute vs. chronic (>6months)
- Early models of pain – little role of psychology
  - Biomedical model (psychogenic vs. organic pain)
  - Stimulus – response
  - Single cause

# Gate Control Theory of Pain

Melzack & Wall (1965)

- Input to the gate – at the spinal cord level input from
  - Peripheral nerve fibres
  - Descending central influences from the brain
  - Large and small fibres
- Output from the gate
  - Gate integrates all of the information and produces output from the gate to an action system resulting in perception of pain



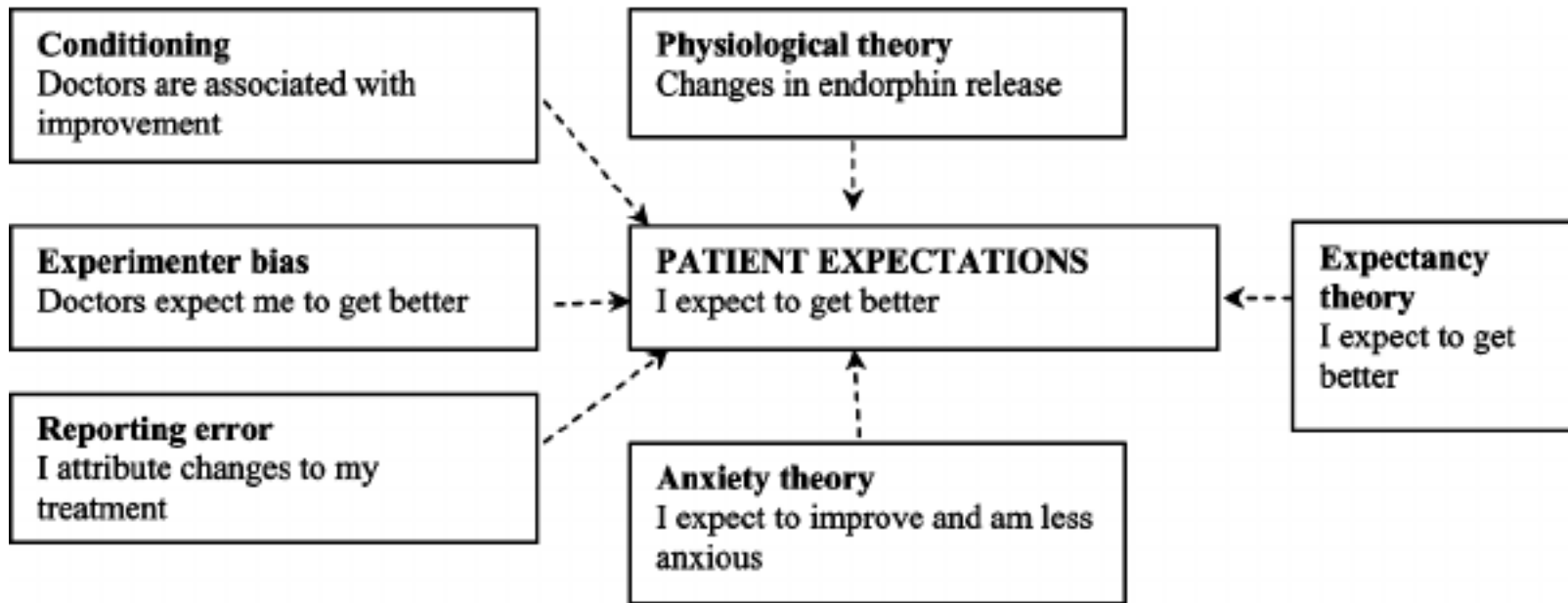


# Discussion

- Ruskin (2017)
  - Mindfulness and pain relief

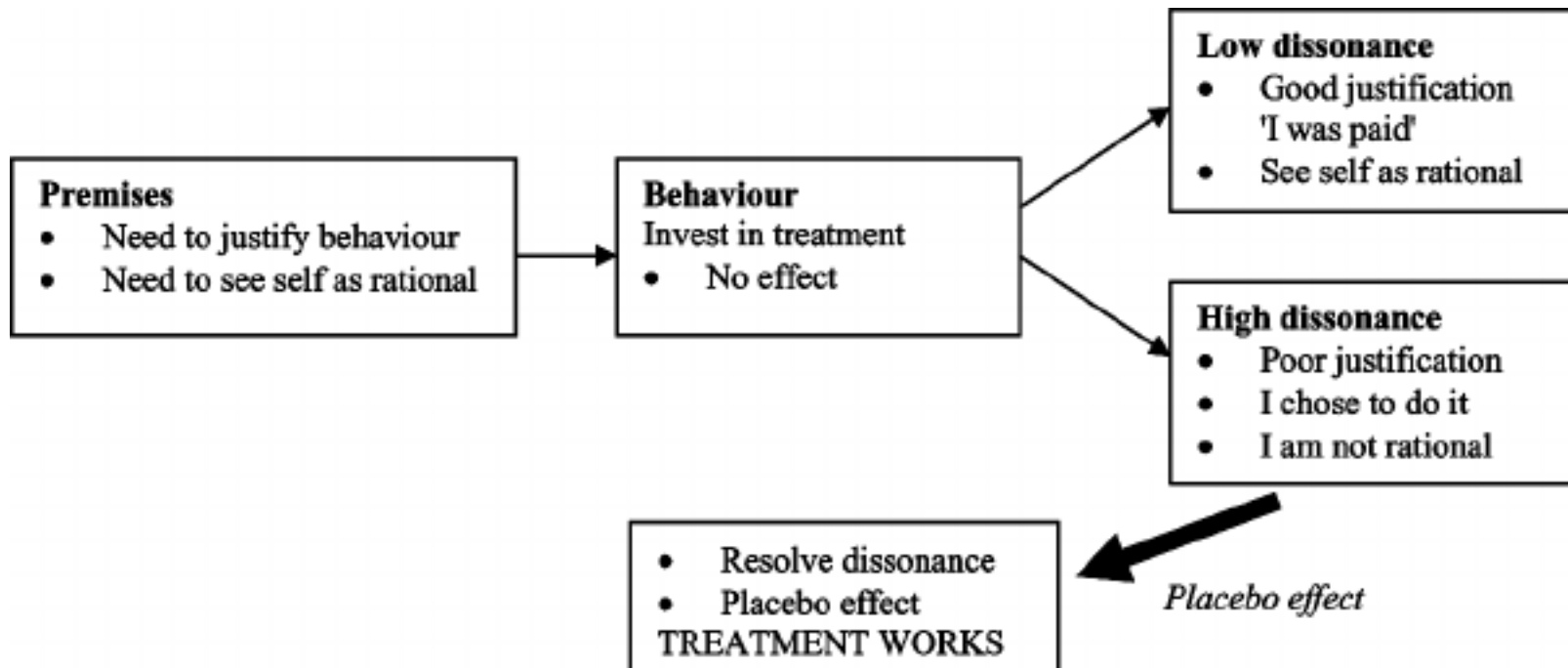
# Placebo

- Inert substances that cause symptom relief
- Any therapy that is deliberately used for its non-specific psychological or physiological effects
- Central role of [patient expectations](#)



# Placebo

- Cognitive Dissonance Theory
  - Does not require expectations to explain placebo effect
  - Effect of investment (Totman, 1987)



# Discussion