STRESS

• CAUSES OF STRESS
• METHODS OF MEASURING STRESS
• MANAGING STRESS
CAUSES OF STRESS

• What causes you stress???
• Three areas to learn about:
  
  • WORK
  
  • HASSLES & LIFE EVENTS
  
  • LACK OF CONTROL
WORK: JOHANSSON (1978); Swedish Sawmill Workers

- A study to measure psychological & physiological stress response in employees
- **Method:** Quasi-experiment: workers defined as high-risk of stress & control group
- **Participants:** 24 workers at Swedish sawmill:
  - 14 high-risk (repetitive, complex, isolated work)
  - 10 (control); cleaners, maintenance work.
JOHANSSEN (1978) continued

- Procedure:
  - Daily urine sample (adrenaline levels)
  - Body temperature taken
  - Self-ratings of mood & alertness
  - Caffeine / nicotine consumption
  - Baseline measures taken at home

- Findings:
  - High-risk group: adrenaline levels x2 from baseline, & more rushed & irritated
  - Control group: adrenaline 1.5 x baseline & declined during shift

- Conclusion: repetitive, mechanized work can lead to higher stress levels
HASSLES & LIFE EVENTS

• **Stressful Life Events:** SRRS *(Holmes & Rahe, 1967)*
  - The Social Readjustment Rating Scale: examines the stress caused by major life events.
  - Developed by asking 400 adults to rate adjustment needed to deal with 43 different life events (e.g., marriage, illness, moving house, etc)
  - Personal score is measures by ticking off events that have occurred to you in last 12 or 24 months & add up values.
  Higher the score - more chance of illness.

• Problems???

• Evidence that minor everyday hassles can combine to have a significant effect on health & illness

• **Aim:** to compare hassles as predictors of stress with life events

• **Method:** Repeated design using self-reports; all participants completed both Hassles & Life Events scale

• **Participants:** 100 Californians, white, above average income & education

• **Procedure:** Self-reports sent by post:
  - Hassles rating every month for 9 months
  - Life Events scale after 10 months
  - Hopkins Symptom Checklist & Bradburn Morale Scale

• **Findings:** Hassles correlated more positively with stress symptoms than life events (see also male/female data)

• **Conclusion:** Hassles better predictor of stress
LACK OF CONTROL

• **KEY STUDY:** **GEER & MAISEL (1973):** The Effect of Control in Reducing Stress Reactions

• **Method:** Laboratory experiment: shown photos of car-crash victims

• **Participants:** 60 psychology students from NYU

• **Procedure:** Random allocation to groups:
  - Group 1: given control over how long to view photos
  - Group 2: no control but knew what would happen
  - Group 3: no control & no predictability

- Each p seated in sound-shielded room & wired to galvanic skin response (GSR) & heart rate monitor
- Standardized instructions & photographs shown (preceded by 10 second tone)
- GSR taken at standard points
GEER & MAISEL continued

- Findings:
  - Heart rate monitors inaccurate - discarded
  - Group 1 (control & predictability): less stress response to photos than groups 2 & 3
  - Group 2 (no control but predictability): more stress with tone

- Conclusion: Participants showed less GSR indicating less stress when they had control.

- Evaluating study:
METHODS OF MEASURING STRESS

• How can we measure stress??

• PHYSIOLOGICAL MEASURES:
  - GSR / Heart rate (Geer & Meisel, 1973)
  - Biochemical measures (urine, blood)

• SELF-REPORT MEASURES:
  - SRRS (Holmes & Rahe, 1967)
  - Hassles (Kanner et al, 1981)

• COMBINED APPROACH:
  - Combining methods may overcome methodological problems with above. A more holistic measure.
MANAGING STRESS

• What techniques can we use to manage stress?

• **COGNITIVE** (assumes faulty processing or thought patterns)

• **BEHAVIOURAL** (assumes learning through reinforcements or associations)

• **SOCIAL** (recognises the importance of social interaction & support)
MANAGING STRESS: COGNITIVE

- **KEY STUDY: MEICHENBAUM et al (1975): Stress Inoculation Therapy:**
- Stress caused by faulty processing of information. Negative thoughts may be due to past experience or current perceptions.
- Meichenbaum: three components of SIT:
  1. **Awareness of thoughts** in stressful situation (self-instructions or verbalisations):
     “I’m so rubbish at exams”
  2. **Coping strategies** taught to enable restructuring of thoughts. Relaxation techniques
     “I’ve revised everything & can do this” (deep-breathing)
  3. **Uses techniques** in real life situation:
MICHENBAUM (1975): Stress Inoculation Therapy

- Study to compare SIT with behavioural systematic desensitisation
- **Method:** field experiment using self-reports
- **Participants:** 21 students (age 17-25), volunteers
- **Procedure:**
  - Matched pair design & randomly allocated to groups
  - Tested using test-anxiety questionnaire
  - IQ tests
  - Anxiety Adjective Checklist
  - SIT Group: 8 therapy sessions (+ve statements / relaxation)
  - SD Group: 8 therapy sessions (Prog. Relaxation)
- **Findings:** SIT group showed more reported improvement in anxiety levels
- **Conclusion:** SIT is more effective at reducing anxiety than SD (due to cognitive component)
MANAGING STRESS: BEHAVIOURAL

• **Biofeedback**: a method of giving feedback on biological functioning (increased heart rate, high blood pressure, skin conductance, muscle tension, etc) enabling control over them, & thus reducing stress.

• **Behaviourist**: visible/audible feedback on body & rewards for reducing stress reaction (+ve reinforcement)

- **Aim**: To see if biofeedback is due to placebo effect or if it effectively reduces tension headaches.
- **Method**: Experiment (partly lab) & self-reports (8 weeks)
- **Participants**: 18 respondents to newspaper advert. Aged 22-44 (2M/16F), medical/psychiatric screening
- **Procedure**: Independent measures design. 3 Groups:
  - **Group A**: biofeedback & relaxation & EMG feedback
  - **Group B**: Relaxation & pseudo-feedback
  - **Group C**: Control group (waiting list)
- 2 weeks: ps kept hourly records of headaches. MMPI self-report
Findings:
Group A: muscle tension significantly lower than Group B. Reported headaches dropped significantly from baseline & less than Groups B & C. Also, significant reduction in hypochondriasis, & drug use.

Conclusion:
Biofeedback - effective way to train patients to relax & reduce tension headaches.
An effective method for stress reduction.

Problems with study?
MANAGING STRESS: SOCIAL

• Social support relates to how the social situation can help reduce stress.


• Method: Quasi experiment. Data collected by questionnaire & interview

• Participants: 133 women under 55 with breast cancer.

• Procedure: Self-reports about existing social networks. Medical records: details of diagnosis, survival & recurrence rates (5 years later)
• **Findings:** aspects of social network linked with survival:
  - marital status (married)
  - supportive friends
  - contact with friends
  - social network
  - employment

• **Conclusion:** Social networks & social support significantly related to survival. Assumes that stress is reduced.

• **NB:** Prospective aspect of study removes biases of retrospective studies