Secondary Interventions at the Workplace

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Why Interventions are Critical

- Some employers assume that stressful working conditions are a necessary evil
- => that companies must turn up the pressure on workers and set aside health concerns to remain productive and profitable in today's economy

The Truth About Stress – Angela Patmore 2006

- She argues that "Stress" is everywhere
- A great therapeutic industry has grown up
- This industry promise to manage stress without defining it.
- We are urged to talk, to cope with a range of experiences from being at the scene of a tragedy to watching it on TV.
- Angela Patmore believes not only that stress is poorly defined but that there's nothing there to manage.
- According to her, the millions of miserable workers recorded as suffering from stress are actually suffering from "stress phobia": a fear of a non-existent force. They have, she proposes, been pushed into this deluded condition by the "stress industry".

Research Challenges to the "Necessary Evil" Assumption

- **Studies show that stressful working conditions are actually associated with**
  - **Increased illnesses (e.g., psychological distress, depression, injuries, and CVD to name a few)**
  - **Loss of productivity characterized by increased absenteeism, tardiness, and intentions by workers to quit their jobs**
  - **all of which have a negative effect on the bottom line.**

Healthy Work Organizations

- Recent studies of so-called healthy organizations suggest that policies benefiting worker health also benefit the bottom line.
- A healthy organization is defined (e.g. by NIOSH) as one that has low rates of illness, injury, and disability in its workforce and is also competitive in the marketplace.
- NIOSH research has identified organizational characteristics associated with both healthy, low-stress work and high levels of productivity.

Healthy Work Organizations: Some examples of healthy work practices

- Recognition of employees for good work performance
- Opportunities for career development
- An organizational culture that values the individual worker
- Management actions that are consistent with organizational values

Healthy Work

- **These are among the basic protective measures so that work is not unhealthy.**
- **However, healthy work is not just the absence of unhealthy conditions.**
- **Healthy work addresses the human need for;**
  - fulfilling work,
  - work that satisfies human needs for dignity, creativity, and a sense of purpose.

Workplace Democracy – Gardell[1]

- The view that scientific management and human relations were antagonistic ideas emerged around 1960.
- The less content work has – objectively – and the less the worker has control over planning and working methods,the less rewarding is the work situation and more work is experienced as constrained and meaningless.
- The main problem is not to state the requirements of a more humane work organization but to develop strategies for bringing such work into existence

- [1] **Gardell, Bertil Worker Participation and Autonomy: A multilevel approach to Democracy at the Workplace**

Democratic Work Organization

- Employee influence at all levels of the company
- True autonomy at the production group level requires that employees have the right to co-determination when it comes to the more sweeping decisions made by the company
- Many obstacles to implementation of this strategy

Overview of Interventions

- Primary – population, organization, source
- Secondary – individual/group,
- Tertiary – individual

Primary preventive Interventions

- ***Primary preventive interventions are proactive***, **aiming to prevent the occurrence of illness among healthy individuals.**
- **These address sources of stress in the workplace, or stressors, through alterations in physical or psychosocial work environment, or through organizational changes.[24]**
- **Examples include changes in work pacing and job redesign, and the formation of joint labour/ management health & safety committees. Primary preventive interventions may also be referred to as 'stress prevention**

Secondary interventions

- ***Secondary interventions are ameliorative***, **aiming to modify an individual's response to stressors, targeting the individual with the underlying assumption that focusing on individuals' responses to stressors should be done in addition to—or in preference to—removing or reducing stressors.**
- **Examples of secondary prevention interventions include stress management classes to help employees to either modify or control their appraisal of stressful situations, such as the development of muscle relaxation or meditation skills.**

Tertiary interventions

- **Finally, *tertiary interventions are reactive*, aiming to minimize the effects of stress-related problems once they have occurred, through 'treatment' or management of symptoms or disease.**
- **These include efforts to help employees to cope more effectively with reactions to stressful conditions, counselling (such as in the form of employee assistance programs), and return-to-work and other rehabilitation programs.**
- **'Stress management' generally refers to secondary and tertiary interventions.**

Health promotion efforts in the U.S.

- **Community intervention trials**
  - efforts to change smoking, diet and exercise behavior
  - Stanford, Minnesota and Pawtucket programs in the 1980s showed a decline in risk in targeted groups
  - against a background of strong secular trends, overall program effects were modest in size & duration (& within chance levels)
- **Why limited success?**
  - strong secular trends (society-wide improvements in diet and exercise, declines in smoking, increases in obesity)
  - differences by social class and race/ethnicity
  - Structural limitations

Luepker RV, Murray DM, Jacobs DR, et al. Community education for cardiovascular disease prevention: Risk factor changes in the Minnesota Heart Health program. American Journal of Public Health 1994;84:1383-1393.
Susser M. Editorial: The tribulations of trials – intervention in communities. American Journal of Public Health 1995;85:156-158. Shea S, Basch CE, Lantigua R, Wechsler H. The Washington Heights-Inwood Healthy Heart Program. Preventive Medicine 1992;21:203-217.

Health promotion efforts in the U.S.

- **Work site programs**
  - –Few studies include control group or randomized Ss
  - –Most used a short measurement period to determine impact
  - –Self-selection bias, both at start, and high attrition
  - –Few interventions have focused on the physical, psychosocial or policy work environment
  - –Tendency for less participation by higher-risk, e.g., lower SES employees

Wilson MG, Holman PB, Hammock A. A comprehensive review of the effects of worksite health promotion on health-related outcomes. Am J Health Promotion 1996;10:429-435.
Pelletier KR. Clinical and cost outcomes of multifactornal, cardiovascular risk management interventions in worksites: A comprehensive review and analysis. J Occup Environ Med 1997;39:1154-1169.
Fielding JE. Commentary: Getting smarter and maybe wiser. J Health Promotion 1996;11:109-11.

WHO Assessment Plan

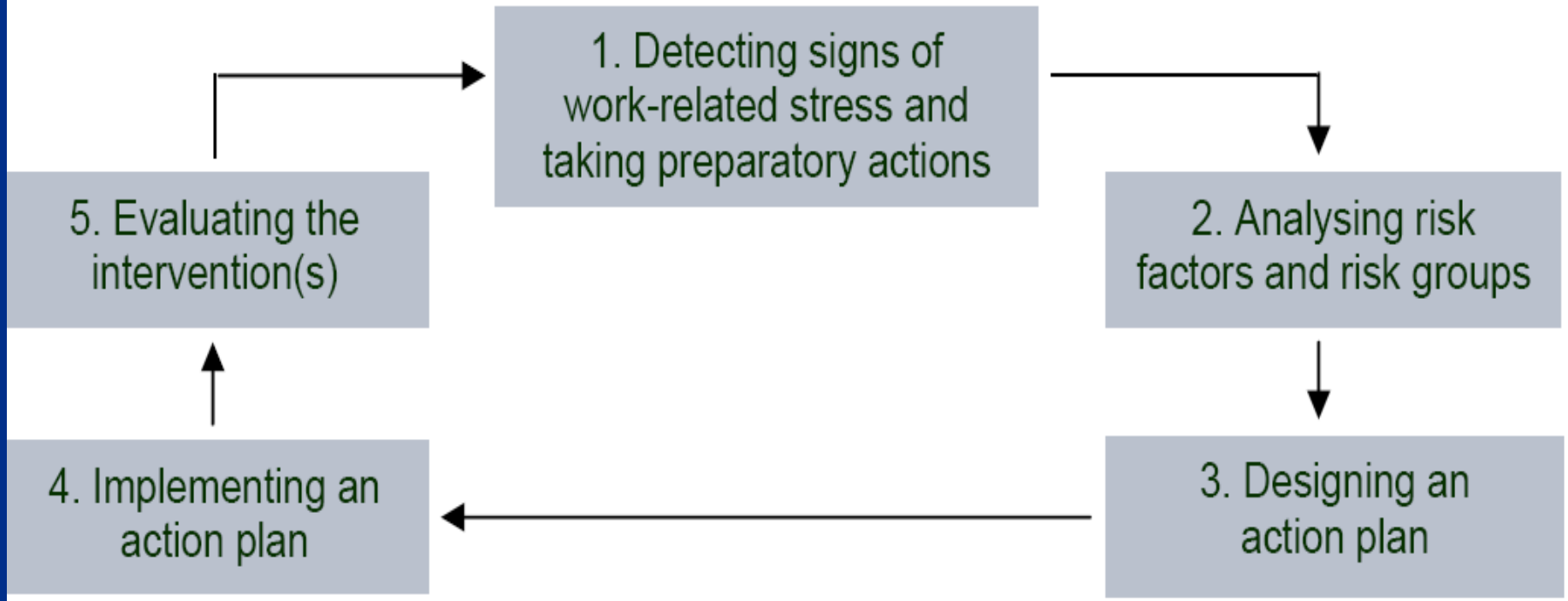


Figure 2: Process of Stress Prevention

Stress Management

- **U.S. interventions tend to focus on stress management[1]**
- **Stress management is either a 2nd or tertiary intervention**
    - 2nd – if focuses on providing individual with skills to modify appraisal
    - tertiary - focus on management of stress
- **[1] Fielding JE, Piserchia PV. Frequency of worksite health promotion activities. Am J Public Health. 1989;79: 16-20.**

Stress Management Training (SMT)

- "Techniques and programs that are designed to help employees modify their appraisal of stressful situations (2nd) or to deal more effectively (i.e. cope) with the symptoms of stress, or both." (tertiary) (Murphy 1996)
- Alternative term for secondary or tertiary interventions
- Most research after 1980

Employee Assistance Programs (EAPs)

- EAPs provide individual counseling for employees with both work and personal problems.
- Stress management training may rapidly reduce stress symptoms such as anxiety and sleep disturbances
- They have the advantage of being inexpensive and easy to implement

- **Psychosocial interventions are aimed at various points in the stress process and can be classified as**
  - **(a) organizational change (*primary interventions)*,**
  - **(b) stress reduction (*secondary interventions)*, or**
  - **(c) stress treatment such as employee assistance programs (*tertiary interventions)*.**

- **Nearly one-half of large companies in the United States provide some type of stress management training for their workforces. Stress management programs teach workers about the nature and sources of stress, the effects of stress on health, and personal skills to reduce stress-for example, time management or relaxation exercises.**

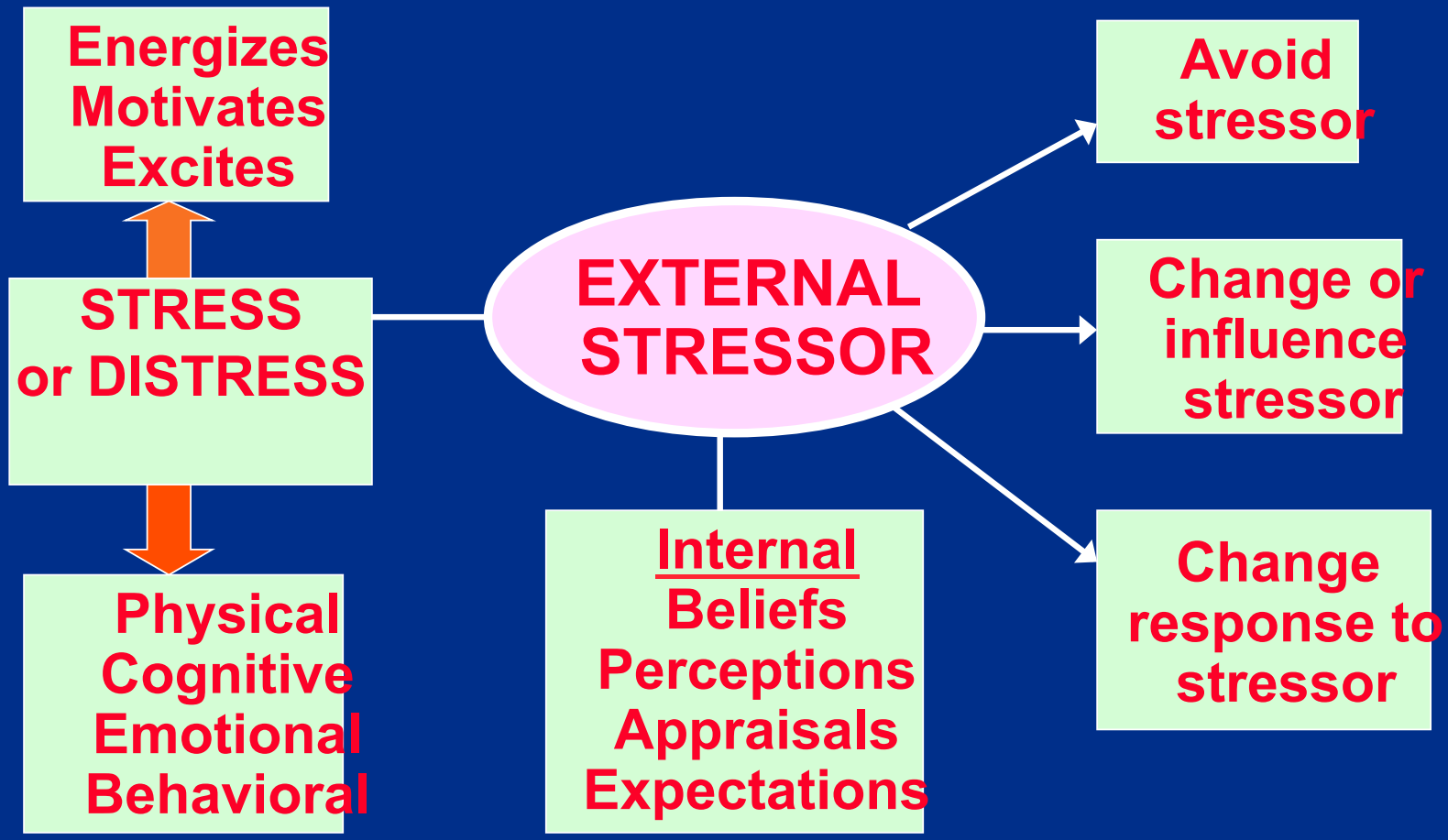
- **However, stress management programs have two major disadvantages:**
  - The beneficial effects on stress symptoms are often short-lived.
  - They often ignore important root causes of stress because they focus on the worker and not the environment.

Secondary Intervention Model

- **Based on transactional model**
  - Person-organization interaction influenced by cognitive appraisal
- **Stressor**
  - "Perceived challenge, obstacle, or threat to one's goals, health, or happiness"
- **Stress**
  - When person believes her coping resources are not sufficient to meet the perceived challenge
- **Response**
  - Physical, cognitive, emotional, behavioral

Quillian-Wolever and Wolever 2003

Secondary Intervention Model



Modified from Quillian-Wolever and Wolever 2003

Physical Response

- Chronic “fight or flight” response without sufficient rest
- Increased heart rate, increased blood pressure, circulation of glucose and free fatty acids to escape danger
- Modern stressors may not be alleviated by these responses
- CVD; diabetes, cancer, some autoimmune illnesses

Quillian-Wolever and Wolever 2003

Autonomic Nervous System: Summary of Effects

(Quillian-Wolever and Wolever 2003)

Function	Sympathetic Arousal	Parasympathetic Arousal
Skeletal muscles	Tense, in use	Relaxed
Blood	To skeletal muscles, heart, lungs	To central organs
Heart rate	Increases	Decreases
Respiration	Increases	Decreases
Blood pressure	Increases	Decreases
Stress hormones	Increases	Decreases
Blood sugar	Increases	Decreases
Release of fats into circulation	Increases	Decreases
Sexual functioning	Decreases	Increases
Digestion/peristalsis	Decreases	Increases
Immune functioning	Decreases	Increases

Types of Responses to Stress: I. Physical Response

- Chronic indicators: hypertension, fatigue, insomnia, immune suppression
- Acute indicators: temporary fatigue, racing heart rate, shortness of breath, headaches, muscle tension
- Coping tools: exercise, progressive muscle relaxation, deep-breathing, massage therapy

Quillian-Wolever and Wolever 2003

II. Cognitive Response

- Arousal beyond optimal level for maximal performance
- Indicators: racing thoughts, obsessive thinking, scattered attention, loss of perspective, focus on the negative aspects while discounting the positive, difficulty with short-term memory, more rigid thinking patterns
- Coping tools: meditation, cognitive- behavioral training

Quillian-Wolever and Wolever 2003

III. Emotional Response

- Indicators: increased frequency or intensity of anger, impatience, anxiety, depression
- Emotions are influenced by cortex, therefore thoughts and behaviors can change emotions
- Coping tools: meditation, cognitive-behavioral training

Quillian-Wolever and Wolever 2003

IV. Behavioral Stress Response

- Indicators: increase in alcohol intake, nicotine use, drug use, eating when not hungry, sleep disturbances, worsening communication behaviors, “nervous habits”

- Coping tools: cognitive-behavioral training

Quillian-Wolever and Wolever 2003

Four Resposnes –> Four Intervention:

I. Physical Coping Strategies

- **Relaxation techniques**
- **Somatic**
  - Progressive muscle relaxation, most common for stress management
- **Cognitive**
  - focus on breath, biofeedback, self-hypnosis, imagery, meditation

I. Physical Coping Strategies

- Massage therapy: reduce muscle soreness, enhance immune system, stimulate parasympathetic nervous system leading to relaxation response, reduce anxiety and depression
- Exercise: positive impact on mood states, immune system, CV responses, stress reactivity, job satisfaction

Quillian-Wolever and Wolever 2003

I. Physical Coping - Exercise

- **Physically fit people have lower SNS activity in response to physical load**
  - Mixed results for stress
  - De Geus and Van Doornen (1993) found that 8mo intensive fitness program did not change reactivity to stress; did reduce overall HR and BP
  - Effects through neurotransmitter regulation
- **Psychological benefits**
  - Less depression*, fatigue, confusion, anger
  - Many studies are flawed
  - Effects through distraction, self-confidence, self-esteem, social support
- **Not clear why it works, but it seems to be helpful**

Jones and Bright 2001

II. Cognitive Strategies - Relaxation

- **Breathing: reduce SNS activity**
- **Biofeedback: reduce muscle tension, SNS**
- **Self-hypnosis: elevate mood, reduce pain**
  - Autogenic training
- **End state imagery**
- **Meditation: reduce SNS, elevate mood, positive change in hormone levels**
  - Respiratory One Method

Quillian-Wolever and Wolever 2003; Murphy 1996

II. Cognitive Coping Strategies

- **Cognitive reframing techniques**
  - Premise: thoughts, beliefs, values impact one's assessment of stressors and intensity
  - Learn to reinterpret situations
  - Elevate mood, improve outlook
  - Stress inoculation is most common (Murphy 1996)

Quillian-Wolever and Wolever 2003

II. Stress Inoculation Training

- **One can learn techniques to withstand more severe stressors in future (Meichenbaum 1985)**
- **Combines physical and cognitive approaches**
- **Three phases:**
  - Rationale: how cognitive appraisal processes impact behavior (conceptualization phase)
  - Coping: variety of approaches (involves skill acquistion and rehearsal)
  - Rehearse: practice, role-playing, visualization (application stage)

Meichenbaum, D. (1996). Stress inoculation training for coping with stressors. *The Clinical Psychologist, 49,* 4-7.

II. SIT cont:

- SIT has been employed on a treatment basis to help individuals cope with the aftermath of exposure to stressful events and on a preventative basis to "inoculate" individuals to future and ongoing stressors

II. Cognitive Coping Strategies

- **Assertiveness training**
  - Techniques to help people express their needs in healthy interpersonal exchanges
  - Better manage demands (e.g., saying “no”)
  - Increases control
- **Problem-solving approaches**

III. Emotional Response

III. Meditation

- Effects through relaxation
- Focusing attention away from stressors on neutral or relaxing stimulus
- Reduces BP, anxiety, somatic complaints (6 studies, Murphy 1996)
- Less gastronomic distress and emotional and behavioral responses to stress (Winzelberg and Luskin 1999)

III. Emotional Responses - Emotional Coping Strategies

- **Social support: reduce CVD, enhance immune function**
  - Most important psychosocial stress buffer

- **Disclosure of emotions: decrease BP and muscle tension, enhance immune function**

Quillian-Wolever and Wolever 2003

Religious Involvement

- 1995 Detroit Area Study (DAS-95)
- 1139 adults in 3 counties
- Church attendance, prayer
- Psychological distress and well-being
- Church attendance confirmed hypothesis
- Prayer weakly failed to confirm
  - People with severe stressors resort to prayer

Ellison et al. 2001

Canadian Study

- Canadian college students who are involved with campus ministries visited the doctor less, scored higher on tests of psychological wellbeing, and coped with stress more effectively.
- Older women are more grateful to God than older men, and they receive greater stress-buffering health effects due to this gratitude.

- Those with an intrinsic religious orientation, regardless of gender, exhibited less physiological reactivity toward stress than those with an extrinsic religious orientation. They were also less afraid of death and had greater feelings of wellbeing. (Those who were intrinsically oriented dedicated their lives to God or a ‘higher power’, while the extrinsically oriented ones used religion for external ends, like making friends or increasing community social standing.

- http://stress.about.com/od/optimismspirituality/a/22307_God_power.htm

Religious Involvement

- Inversely associated with psychological distress and positively correlated with well-being

Ellison et al. 2001

IV. Behavioral Coping Strategies

- **Avoid the stressor**
- **Change the stressor**
  - Solution focused approach (Williams and Williams 1997)
  - Identify problem
  - Generate options
  - Take active steps
- **Change response to stressor**

Quillian-Wolever and Wolever 2003

- **Many models; a few are:**
  - Behavior: discouraging drinking, smoking
  - Physical: meditative prayer for relaxation
  - Cognitive buffering: reframe situations (less serious, opportunity for growth, part of broader plan); greater confidence to cope
  - Psychological resources: self-esteem, control
  - Social support: shared values, tangible assistance, counseling services

Stress Management Training (SMT) among Managers

- **Large manufacturing organization; no apparent stress problems**
- **62 managers divided into 4 groups: management skills, meditation, exercise, control**
  - Management skills: goal setting and prioritizing, communication, listening, skill development, empathy
  - Meditation: 15-20min, 1-2x/day; meditation sounds to help focus
  - Exercise: 30 min aerobics, 3x/wk
- **10-12 hours training; control-general stress information**
- **After 13 weeks, intervention groups split and given 2nd 10-12 hours training**
- **BP and HR measured every 2 weeks**

Bruning and Frew, 1987

SMT among Managers

- **Results:**
  - Over 6 months, all three interventions led to reduced BP and HR, including combos
  - No significant differences between interventions
  - No significant differences between combinations
- **Conclusion: range of interventions may have benefit**

SMT for Hypertension

- **22 patients with hypertension; 21 control patients on waiting list**
- **Training: education, relaxation, problem-solving**
- **Results:**
  - More patients reduced BP of 5mm Hg or more
  - More patients reached normal BP
  - Significant differences remained for 4 months

Garcia-Vera et al., 1997; 1998

SMT for Hypertension

- Review by Murphy (1996)—blood pressure most common physiologic outcome measure
- 20 assessments in 13 studies
- -7.8mm Hg (4-21) systolic BP in trained group
- -5mm Hg (1-12) diastolic BP in trained group
- But -4.9mm Hg/-2.7mm Hg in control group
- As whole SMT has small effect, but muscle relaxation training and meditation significant

Biofeedback and Hypertension

- Greenhaigh Janette etal. Biofeedback for Hypertension: a systematic review. J of Hypertension, Vol 28 #4 p644-652

- We found no convincing evidence that consistently demonstrates the effectiveness of the use of any particular biofeedback treatment in the control of essential hypertension when compared with pharmacotherapy, placebo, no intervention or other behavioural therapies

Case studies of work stress interventions

Swedish government office workers

Intervention (8 months)

- **Education program**
- **Relaxation training**
- **Worker committees developed "action plans" (job conditions to be improved, proposed actions, responsible individuals, time table, priority), held weekly meetings**

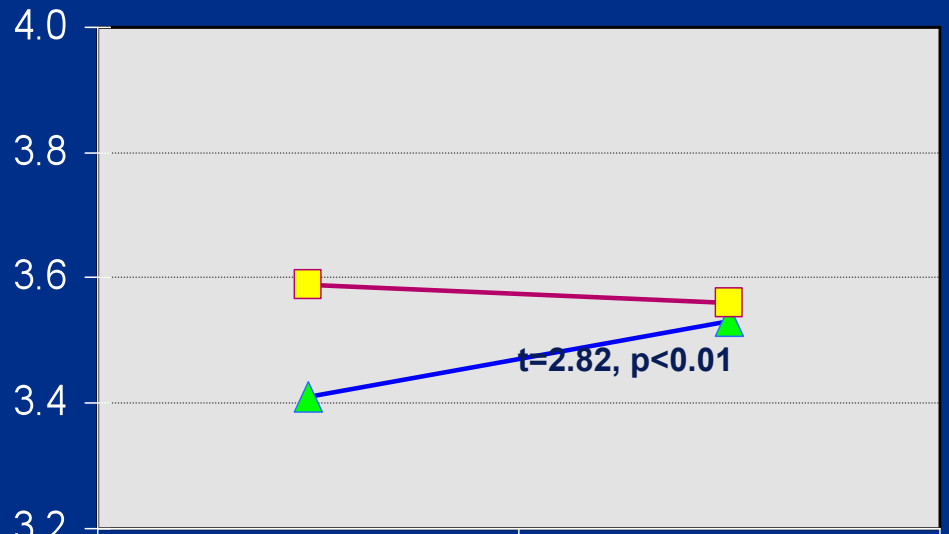
Groups

- **4 intervention groups (n=94); 1 control group (n=35)**

Source: Orth-Gomer K, Eriksson I, Moser V, Theorell T, Fredlund P. Lipid lowering through work stress reduction. *international Journal of Behavioral Medicine* 1994;1(3):204-214.

Swedish government office workers

Work stimulation and autonomy



	March	October
Intervention	3.41	3.53
Controls	3.59	3.56

Source: Orth-Gomer K, Eriksson I, Moser V, Theorell T, Fredlund P. Lipid lowering through work stress reduction. *international Journal of Behavioral Medicine* 1994;1(3):204-214.

Swedish government office workers

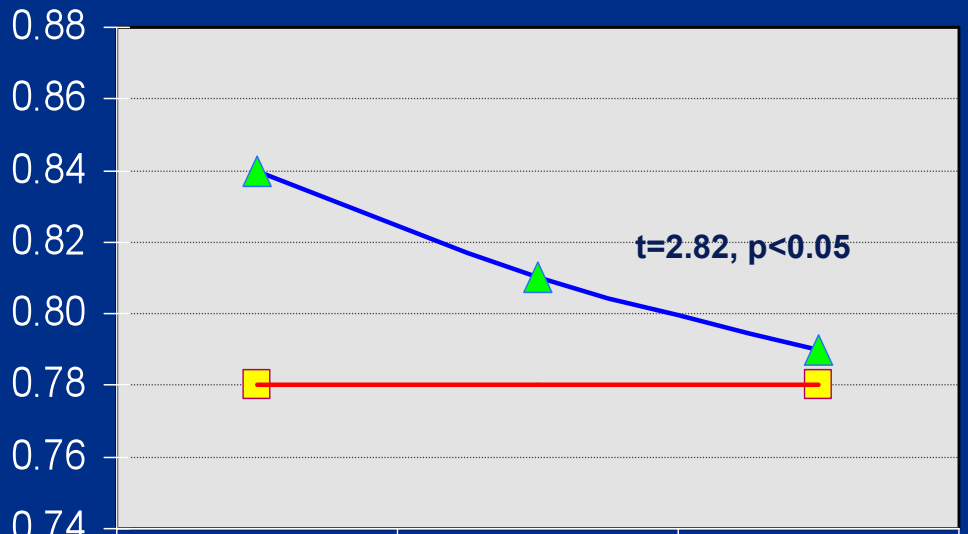
Supervisor support

	March	June	October
Intervention	2.07	1.93	2.19
Controls	2.57		2.4

Source: Orth-Gomer K, Eriksson I, Moser V, Theorell T, Fredlund P. Lipid lowering through work stress reduction. *international Journal of Behavioral Medicine* 1994;1(3):204-214.

Swedish government office workers

ApoB/ApoAI Ratio



	March	June	October
Intervention	0.84	0.81	0.79
Controls	0.78		0.78

Source: Orth-Gomer K, Eriksson I, Moser V, Theorell T, Fredlund P. Lipid lowering through work stress reduction. *international Journal of Behavioral Medicine* 1994;1(3):204-214.

Dutch manufacturing employees

Intervention (3 years)

- Individual-level
  - Exercise
  - Health fair, health education
  - Training in social skills and leadership
- Organizational-level
  - Support for lifestyle improvement
    - exercise facility
    - smoking policy + healthier food for cafeteria
  - "Task group" of workers given greater authority over production
    - Greater task variety, job rotation
    - Training
    - Reorganization of production line (to improve ergonomics)

Maes S, Verhoeven C, Kittel F, Scholten H. Effects of a Dutch work-site wellness-health program: The Brabantia Project. *American Journal of Public Health* 1998;88(7):1037-1041.

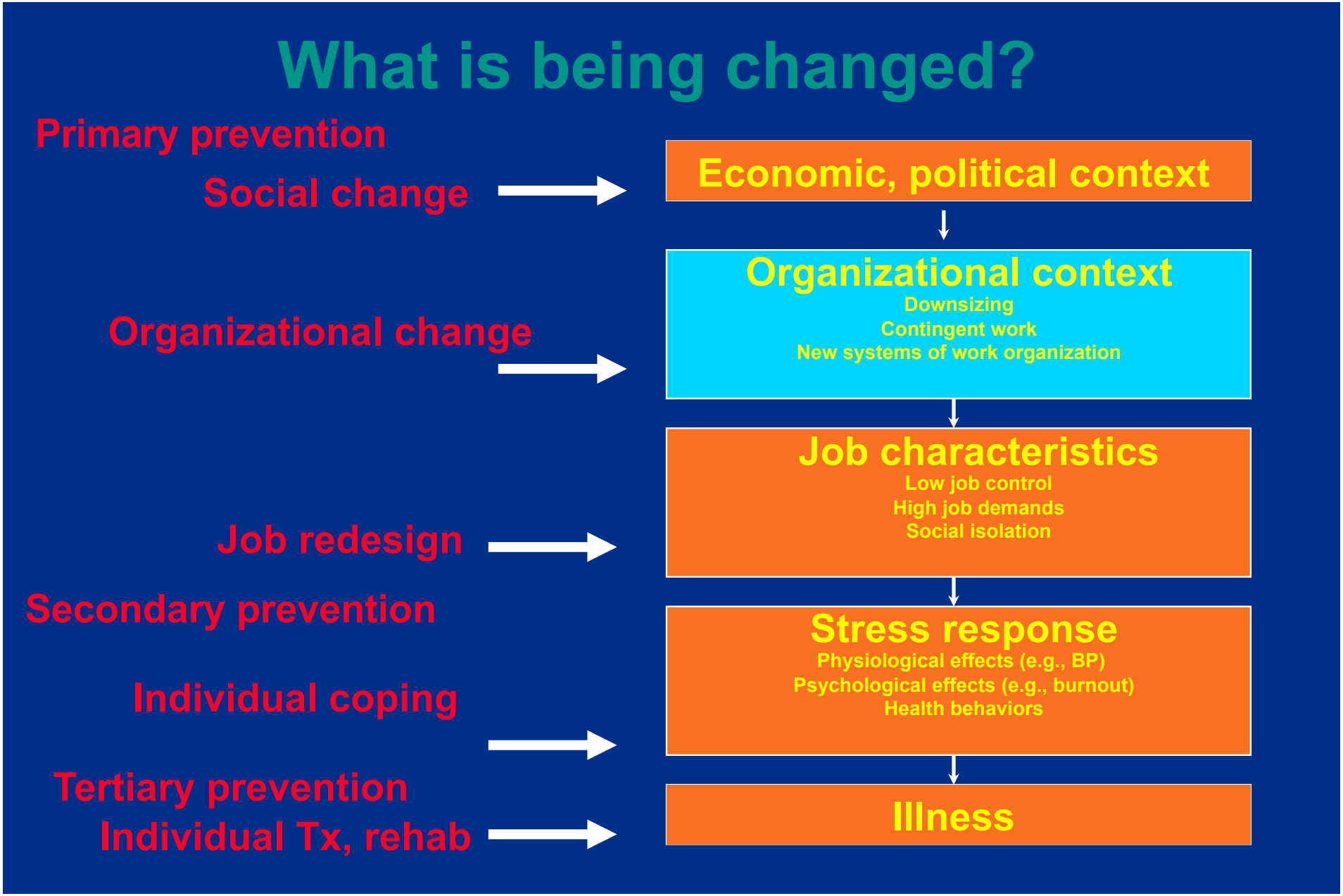
Dutch manufacturing employees

Results (intervention, n=134 vs. control, n=130)

- Reduced cardiovascular risk
- Improved ergonomics
- Greater perceived "job control", reduced "job demands"
- Reduced absenteeism
  - from 15.8% to 7.7% (intervention)
  - From 14.3% to 9.5% (controls)

Maes S, Verhoeven C, Kittel F, Scholten H. Effects of a Dutch work-site wellness-health program: The Brabantia Project. *American Journal of Public Health* 1998;88(7):1037-1041.

What is being changed?



U.S. Public Service Employees

- **79 employees randomly assigned to treatment and control groups**
- **16 hours group training over 8 weeks:**
  - Recognizing emotional and physical responses to stressors at work
  - Objective evaluation of situation
  - Replacing self-defeating thought processes with positive ones

Ganster et al. 1982

U.S. Public Service Employees

- **Results:**
  - After 16 hours training, small reductions in depression, anxiety and adrenaline secretion
  - Maintained after 4 months
- **Limitations:**
  - Can't differentiate between component effects
  - How much training is enough?

Ganster et al. 1982

Comparison of SMTs

SMT Method	Optimal results	Strength
Muscle relaxation	Physiologic	Strong
Meditation	Physiologic, psychological/cognitive, somatic, job/ organizational	strong (conditional)
Biofeedback	Physiologic	weak
Cognitive-behavioral	Psychological/cognitive, somatic	strong
	Job/organizational	moderate
Combination	Physiologic, psychological/cognitive, somatic, job/ organizational	Strong strong

Health Promotion/Health Protection

- **Possibility that combined interventions**
  - Health promotion (eg stress management) combined with
  - Health protection (eg organizational interventions)

  May be more effective than either intervention alone

CSMP (comprehensive stress management progam)

- Recent example is research by Munz, Kohler and Greenberg – Effectiveness of a Comprehensive Worksite Stress Management Program: Combining Organizational and Individual Interventions in Int. J. of Stress Management, Vol 8, #1, 2001

- Combined stress management training with a stressor reduction process
- Pre-post, treatment-control design in four comparable facilities.

- Hypothesis: emotional well-being is an important factor in determining productivity. Worksite stress management is one way to improve emotional well-being
- Programs rarely reach those in need since many have no “felt need” and programs are time intensive
- Organization level interventions have uncertain effectiveness
- Therefore, try combined approaches

Research Population

- Subjects were customer service/sales representatives from a large telecommunications company
- Four comparable units in 4 different cites randomly selected in which 2 received CSMP (self management training and stressor reduction process) and 2 served as control groups
- 55 participants completed self-management training and pre- and post measures. 24 controls did pre and post measures
- Simultaneous with self-management training the CSMP group completed the stressor reduction process

Interventions

- Training in following areas; conceptual information about nature of stress, self-assessments to be used in awareness building, skills training in the use of personal stressors.
- Conceptual input -

Training (conceptual)

- (1) the interactive influence of environmental demands and personal characteristics on the initial reaction to stressors and how this reaction affects thoughts, feelings, and action;
- (2) the stress response as an early warning indicator of excessive strain in these areas;
- (3) the escalating nature of the stress response and stress outcomes because of their effect on environmental demands; and
- (4) the value of self-management in minimizing the stress response and contributing to adaptive behavior.

Self-management strategies

- Three levels: situational, renewal, & preventive.
  - Situational self-management skills minimize the initial stress reaction and include cognitive reprogramming tools, movement exercises, and breathing/centering techniques.
  - Renewal self-management skills are used to recover from the build-up of excessive mental, physical, and emotional strain by returning to a positive mental, emotional, and physical state. Tools taught at this level include self-suggestion, power naps, physical tension reduction, and relaxation exercises.
- No preventive strategies in this intervention

Amount of training

- Participation in the self-management training component was voluntary.
- The format used for training in the present study was 12 hours of skill development
- presented in 3-hour modules following the training model of theory, demonstrate, practice, and action planning.

Stressor Reduction Process

Steps

- **1 - Select representative group from work-unit (4–6 plus facilitator)**
- **2 - Identify work-unit stressors**
  - Brainstorm stressors that impact employee well-being
  - Determine relative importance of the stressors
- **3 - Choose a stressor and conduct root cause analysis**
  - Start with moderately important stressor
  - Identify causes of stressor
- **4 - Plan actions and implementation approach**
  - Identify actions that alter root causes
  - Create action plan for work-unit implementation

Stressor Reduction Process (cont.)

- **5 - Implement and evaluate within work-unit**
  - Actions chosen must be within the authority of the work-unit to implement
  - Actions must not affect adversely other work-units
- **6 Feedback and recommendations obtained from work-unit at each step in process**
  - Recycle process with different stressors
  - Make stressor reduction process part of the work-unit's culture (Facilitator no longer needed)

Outcome measures

- Perceived Stress Scale (PSS) measures the extent to which individuals perceive their life to be stressful.
- The CES-D scale is a 20-item self-report measure that assesses depressive symptoms,
- PANAS – Positive and negative affect schedule - consists of 20 adjectives describing positive and negative feelings and emotions
- Work Assessment Survey (WAS) – assess employee work environment perceptions

Organizational Measures

- Work Group Productivity (sales productivity index based on average revenue per order per work-unit member)
- Absenteeism (average number of days absent per work-unit member)

Results

- Analysis by ANCOVA – used pretests to adjust post tests
- Results - on most emotional well-being measures the experimental group did better on perceived stress, depression, PANAS,
- No significant differences on most of the WAS subscales though experimental group did score higher on subscale of job independence

Work Unit Performance – Fig 1

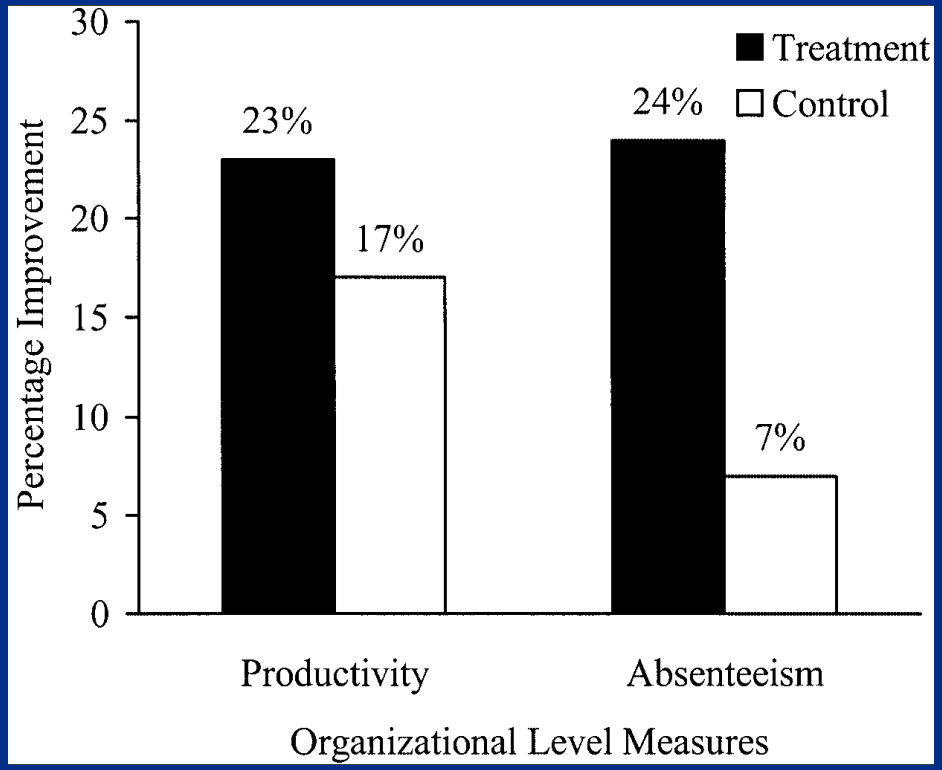


Fig. 1. Comparison between control and treatment group on percentage improvement in productivity (sales productivity index based on revenue per order per work-unit member) and absenteeism (average number of days absent per work-unit member).

Conclusions

- Results of this study provide evidence that self-management training, in combination with the stressor reduction process, improves the emotional wellbeing of the employees who attended self-management training.
- 12 hours of self-management training over a 1-month period showed a marked improvement 3 months later in emotional well-being as assessed by stress, affect, and depression measures.
- work perceptions for the self-management training group were more positive on the work environment perception scale of Job Independence as compared
- with the control group.

Limitations

- The contribution of each component of the CSMP to individual and workunit changes cannot be determined by this study design.
- Therefore, not clear if both interventions are necessary and/or which is more effective.

Intervention Characteristics

- **Very few studies**
- **Leadership: trainer vs. peer-led**
  - Fontana et al. (1999): 18 teenagers; 18 controls
    - Stress inoculation training; 6 sessions; lower heart rate and anxiety afterwards and 6 mo later
- **Size: large one-day vs. small weekly**
  - Brown et al. (1998): 36 large, 36 small, 52 controls; no difference
- **Content: effect of individual components?**
  - Most SMTs use range of techniques
  - Researchers find similar outcomes

Jones and Bright 2001

Tertiary Intervention

- **Rehabilitation of individuals experiencing physical or mental ill health from stress (Cooper and Cartwright, 1986)**
- **Workplace counseling**
- **Employee Assistance Programs (Cooper et al., 2003)**

EAPs

- **Definitions vary depending on objectives**
- **Key components:**
  - Systematic, organized, continuous
  - Employer initiated
  - Employees and their families (in most cases)
  - Work and non-work problems

Goals of EAPs

- Enhancing employee morale and motivation
- Improving productivity
- Reducing disciplinary problems
- Decreasing financial costs of medical and disability claims
- Promoting image of employer

Possible Components

- Substance abuse programs
- Stress management training
- Wellness programs

Conclusions

- **Many different targets & strategies**
- **Importance of integrating:**
  - Primary intervention: occupational health
  - Secondary intervention: workplace health promotion
  - Tertiary intervention: workplace health recovery
- **Interventions require negotiation, teamwork**
- **Need for intervention research**

Occupational Cardiology:
link primary cardiologists and occupational health specialists to:

- Recognize the major role of work in the etiology of hypertension and CVD.
- Establish concept of occupational sentinel health events within cardiology (identification of clusters of work-place related hypertension and CVD).
- Incorporate occupational history-taking into the standard cardiologic work-up.
- Encourage broadest possible application of ambulatory monitoring techniques.
- Develop and validate protocols for the diagnostic work-up of patients with cardionoxious jobs.
- Provide guidelines for modification of the cardionoxious workplace, to protect individual cardiac patients.
- Strive to define and implement a "heart healthy" work environment for all.

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- **Stress-management interventions traditionally implemented in the worksite can be categorized by the type of exposure the intervention is designed to reduce or eliminate including:**
  - (a) environmental (e.g., chemical and biologic stressors),
  - (b) physical and ergonomic (e.g., noise, rotating shiftwork, equipment);
  - (c) psychosocial.