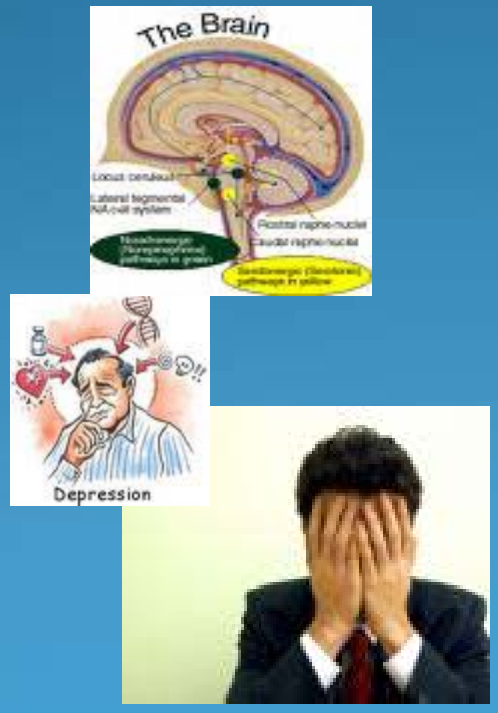
Work Stress and Mental Health



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UCLA Work and Health
Session VII
May 14, 2014

Outline

I. Prevalence and Costs
II. Multifactorial Causes (biomedical, individual, structural/work)
III. Work Stress and Mental Health
IV. Research – Occupational Epidemiology
    a) Measurement
    b) Epidemiological evidence
    c) Contextual factors – gender, SES
    d) Research Limitations
    e) Longitudinal evidence
V. Implications for Intervention: What to Do?

Terminology

- Mental health or mental illness
- Psychological health/well-being
- Psychological distress/illness

I. Prevalence

- In any given 1-year period, 9.5 percent of the population, or about 20.9 million American adults, suffer from a depressive illness.
- In any one year about 3 in every 10 employees will have a mental health problem, and depression is one of the most common.
- Depression is characterized by changes in mood, self-attitude, cognitive functioning, sleep, appetite, and energy level.

Anxiety Prevalence

Anxiety Disorders Association of America (ADAA) 2006

http://www.adaa.org/workplace-stress-anxiety-disorders-survey

- 40% experience persistent stress or excessive anxiety in their daily lives.
- 28% have had an anxiety or panic attack.
- Only 9% have been diagnosed with an anxiety disorder

On the job, employees say stress and anxiety most often impacts their :

- workplace performance (56 percent)
- relationship with coworkers and peers (51 percent)
- quality of work (50 percent)
- relationships with superiors (43 percent)

Costs at work:

A University of Michigan study (2004) of 443 depressed workers:

- 82 percent of the depressed workers had difficulty concentrating
- 83 percent lacked motivation
- 24 percent complained of chronic physical pain
- 50 percent missed one to three days of work because of their illness.
- Only 41 percent felt they could acknowledge their illness and still get ahead in their careers.
- Only 14 percent had taken advantage of employee assistance programs for workers who suffered from depression.

Stigma: Depression Myths

- "Depression is not a real medical problem."

  Depression is caused by a chemical imbalance in the brain and can affect life in much the same way as diabetes or heart disease can.

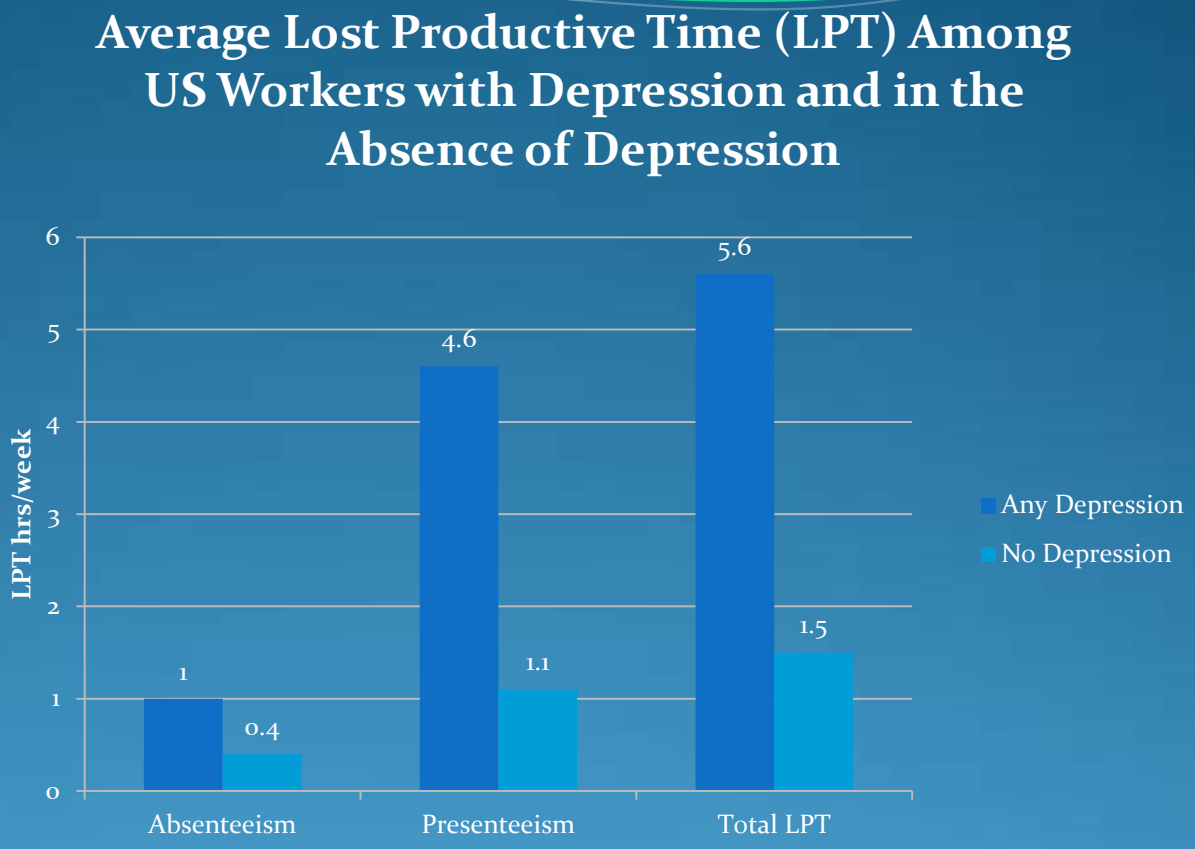
- "People "snap out" of depression by thinking positively."

  Depression is not a sign of weakness or laziness. It is a health problem.

- "Only emotionally troubled people become depressed."

  Depression affects people of all ages, races, and backgrounds, not just people with previous emotional troubles. Stress and trauma often contribute to depression.

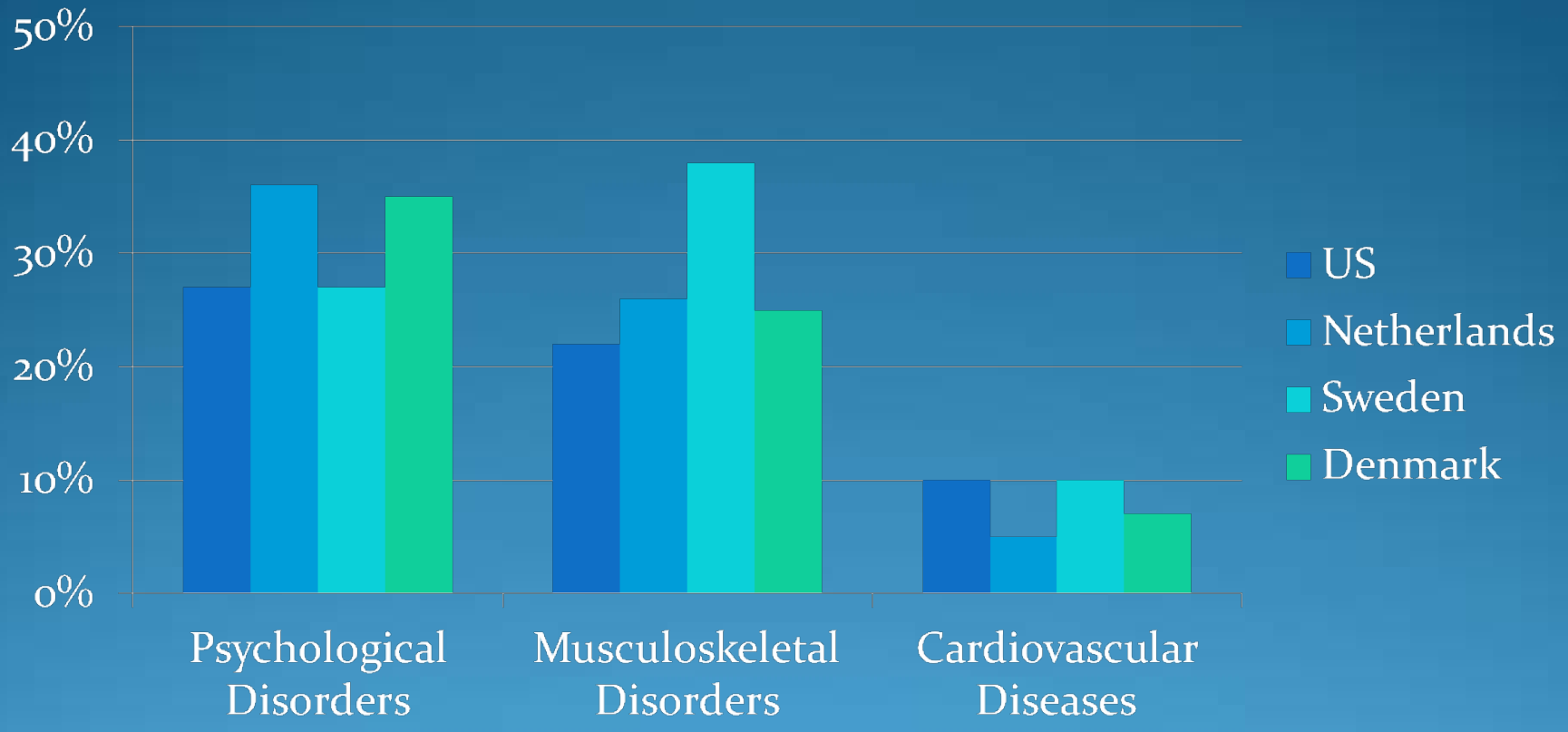
Costs



- This 2003 study draws the sobering conclusion that depression costs employers **$44 billion a year** in lost productivity alone.

Stewart WF, Ricci JA, Chee E, Morganstein D. Lost productive work time costs from health conditions in the United States: results from the American Productivity Audit. Journal Occupational and Environmental Health 2003 Dec;45(12):1234-46.

Major Sources of Disability



- 7-14% of workforce disabled in these countries
  - and % *increasing!*

Veerle Brenninkmeijer et al., 2003: Social Insurance in Sweden 2003, NSIB, 2003; Annual Statistical Report 2001, SSA, 2001; Jan Hogelund et al., 2002

Mental Health Globally

- The World Health Organization found that major depression was the leading cause of disability worldwide .
- Incidence & costs of mental health problems increasing globally (ILO):
- "while the origins of mental instability are complex…a number of common threads appear to link the high prevalence of stress, burnout and depression to changes taking place in the labour market, due partly to the effects of economic globalization."
  - **unemployment, job insecurity, short-term contracts, time pressure, rationalization, new technology, tighter deadlines, quality demands, rising productivity requirements**

Gabriel P, Liimatainen M-R. Mental health in the workplace. Geneva: International Labor Office; 2000.

Lopez AD, Murray C. The global burden of disease, 1990–2020. Nature Med 4(11):1241–3. 1998.

II. Multifactorial Causes

Etiology:

Genetic/family history

Individual/personality (e.g., negative affect, neuroticism)

Life events (e.g., divorce, loss)

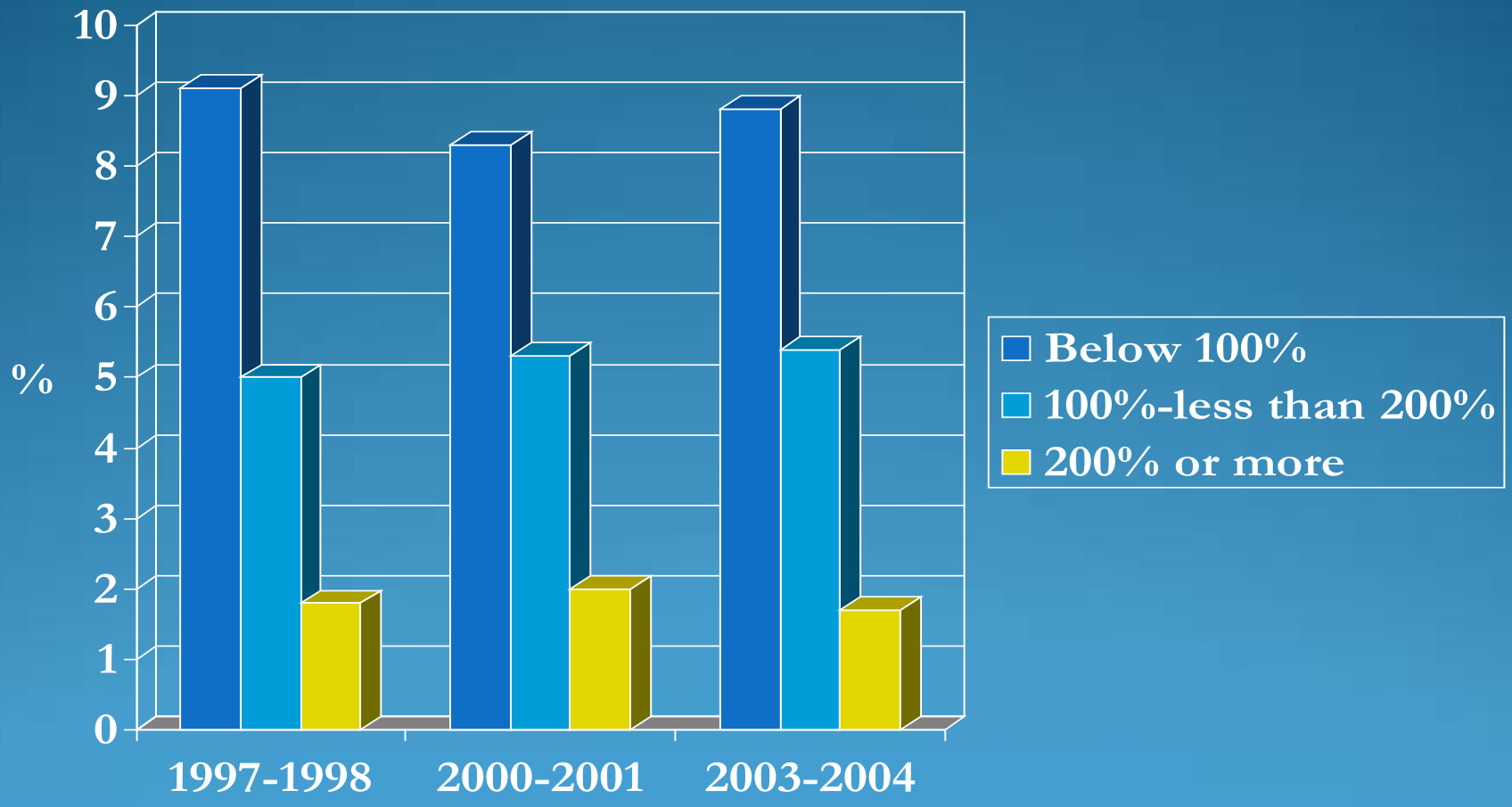
Social structural (e.g. social class/race, gender)

Work stress(ors)

Social Determinants of Mental health

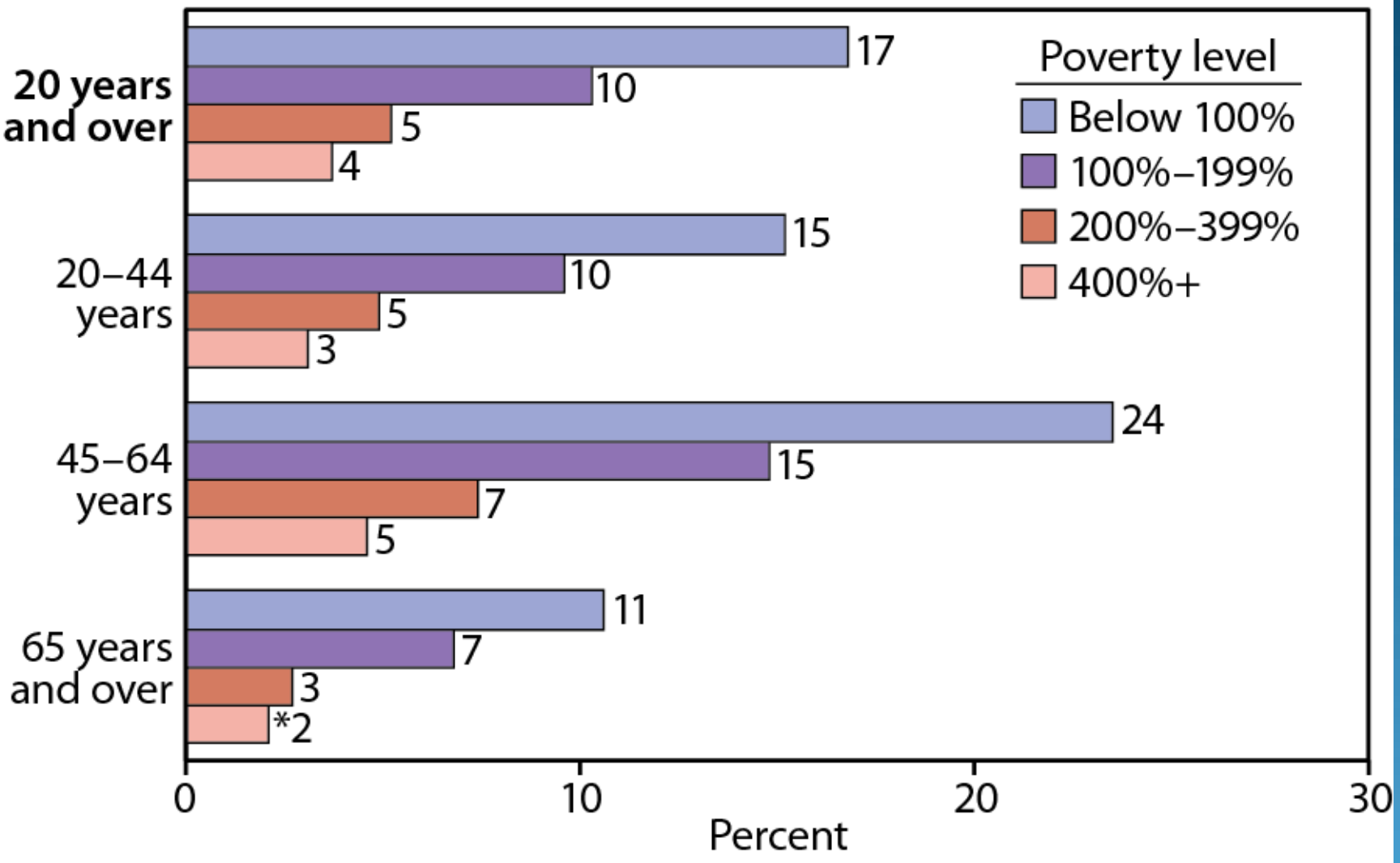
SES/Poverty, Race/ethnicity, and Gender, Age

Serious Psychological Distress by Income (% poverty level), age 18+, U.S.



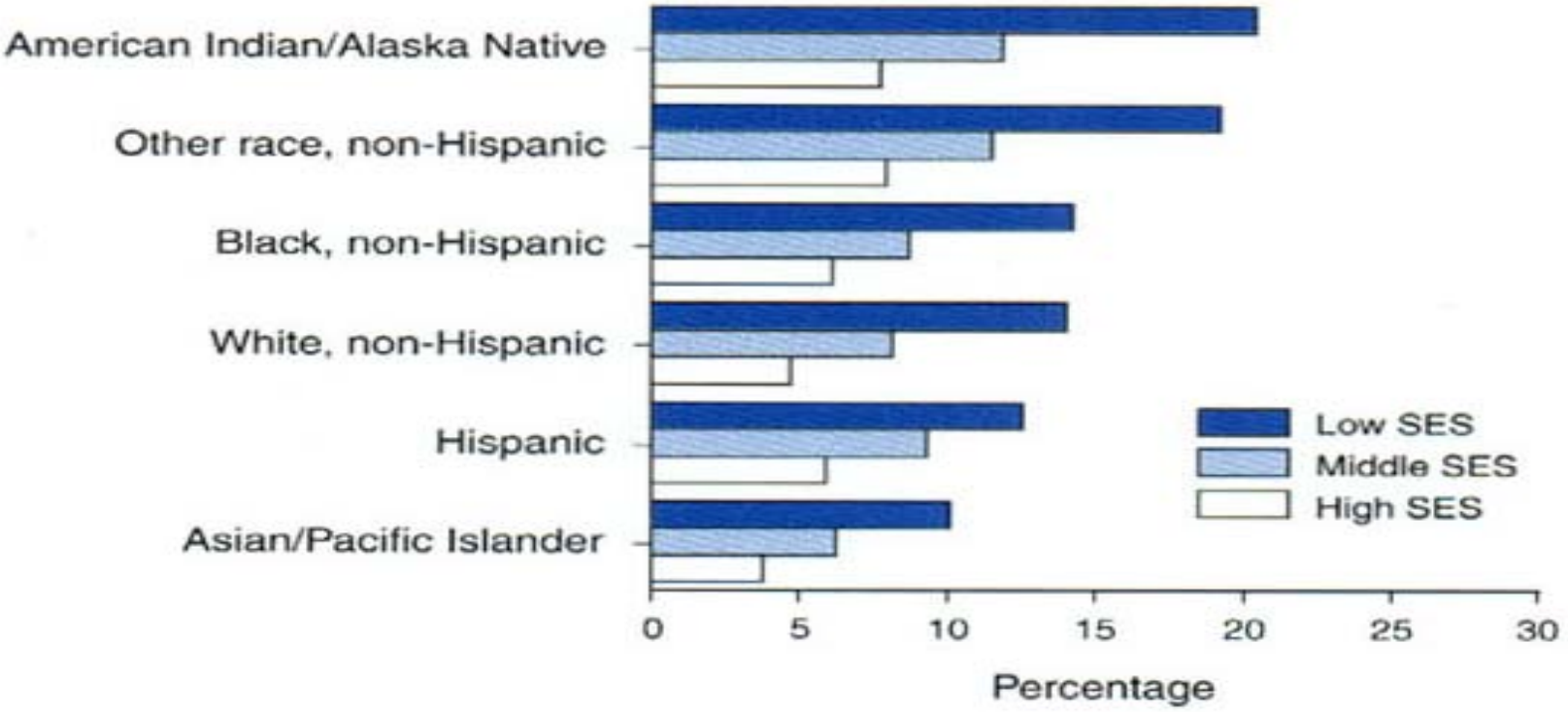
National Center for Health Statistics. Health, United States, 2006. Hyattsville, MD: 2006

Depression, 2005–2010



*Estimates are considered unreliable. Data preceded by an asterisk have a relative standard error of 20%–30%.
SOURCE: CDC/NCHS, *Health, United States, 2011*, Figure 33. Data from the National Health and Nutrition Examination Survey.

FIGURE 2. Prevalence of frequent mental distress*, among adults, by racial/ethnic population and socioeconomic status (SES)† — Behavioral Risk Factor Surveillance System, United States, 1993–2001



* Self-reported mental health was not good (e.g., stress, depression, or emotional problems) ≥14 days during the preceding 30 days.

† Low SES: Those without a high school diploma or with annual household income of <$15,000. High SES: Those with a college education and with annual household income of ≥$50,000. Middle SES: All other respondents.

Zahran HS, R Kobau, DG Moriarty, MM Zack, WH Giles, J Lando. Self-reported frequent mental distress among adults--United States, 1993-2001. *Morbidity and Mortality Weekly Report* 53.41 (Oct 22, 2004): 963(4).

Gender and Mental Health

- Women experience depression about twice as often as men.
- Men's suicide rates are typically many times higher than women's
- 20% of people 55 years and older estimated to have a mental health problem

What Do the Suicides of Fifty-Year-Old Men Reveal?

BY MARGARET MORGANROTH GULLETTE

Politics and Society
VOL. 29, NO. 2 , SPRING 2014

•Over the past decade of devastating recession and feeble recovery from 1999 to 2010, rates of suicide overall have gone up, but the steepest rise was for midlife men.

• The suicide rates for men aged fifty to fifty-four rose from 20.6 per 100,000 to 30.7 per 100,000 (50% increase).

Age and Work

Depressed at work? It could be effort-reward imbalance - Allentown Family Health | Examiner.com

- A study by Yale researchers in the U.S. found significant effects on depression at age 62 both for full-time workers who [had] expected not to be working full-time, and for participants not working full-time who [had] expected to be doing so

  → Reasons? stress, reduced social interactions, and reduced peer social support

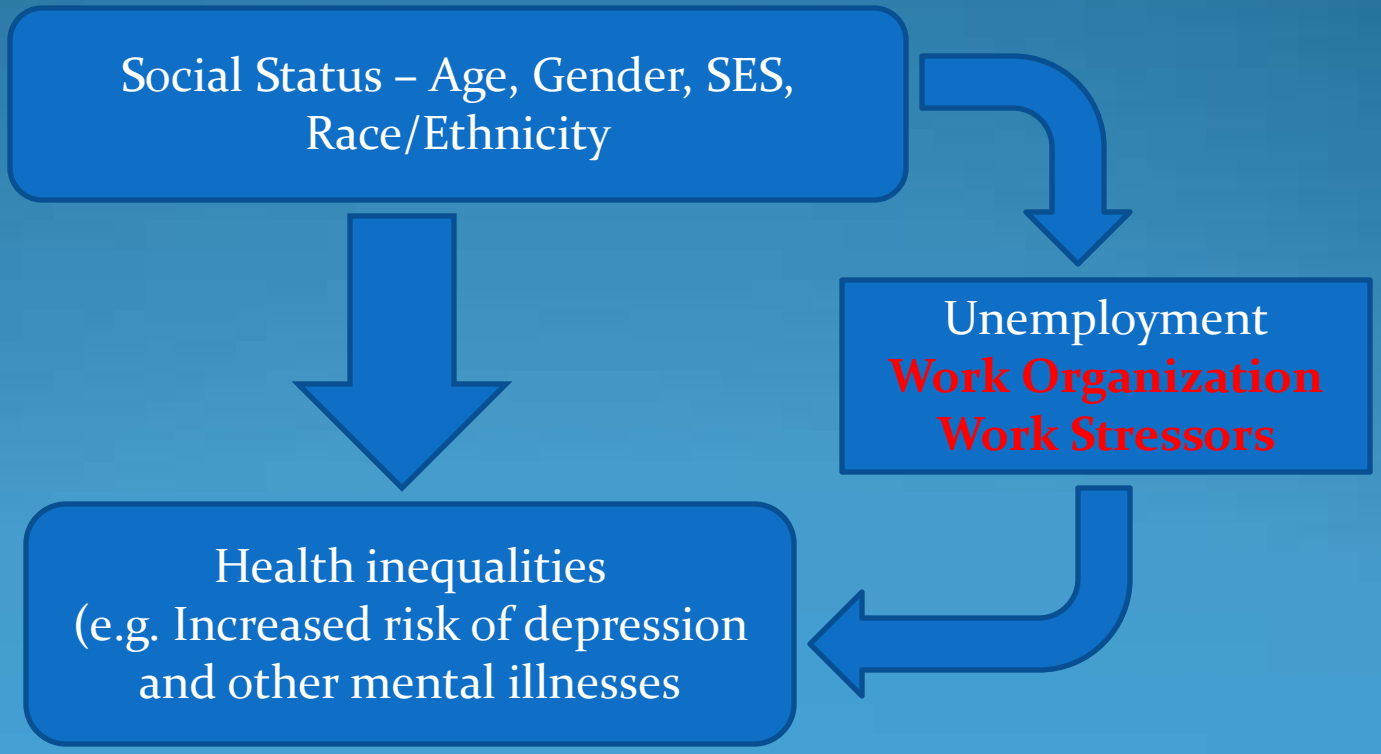
  →Remedy? Access to anti-depressant medications

A team of researchers in Europe looked **at work factors contributing to depression in older workers .**

Individuals involved in the study were significantly more likely to experience depression if their jobs entailed an effort-reward imbalance or if their jobs gave them a low amount of control.

The researchers assert that it is in the national interest of countries with depressed aging workers to "**increase investments into good quality of work and employment**."

III. Work Stress and Mental Health



NIOSH Quality of Work Life added to General Social Survey (2002)

http://www.cdc.gov/niosh/programs/workorg/risks.html

Work-Related Causes of Stress

- Long hours
- Heavy workload
- Changes within the organization
- Tight deadlines
- Changes to duties
- Job insecurity / Few promotional opportunities
- Lack of autonomy
- Boring work
- Insufficient skills for the job
- Over-supervision
- Inadequate working environment /lack of proper resources/equipment
- Harassment /Discrimination
- Poor relationships with colleagues or bosses

http://www.betterhealth.vic.gov.au/bhcv2/bhcarticles.nsf/pages/Work-related_stress?open

Symptoms of work-related stress

Physical symptoms	Psychological symptoms	Behavioral symptoms
Fatigue Muscular tension Headaches Heart palpitations Sleeping difficulties, such as insomnia Gastrointestinal upsets, such as diarrhoea or constipation Dermatological disorders	Depression Anxiety Discouragement Irritability Pessimism Feelings of being overwhelmed and unable to cope Cognitive difficulties, such as a reduced ability to concentrate or make decisions	An increase in sick days or absenteeism Aggression Diminished creativity A drop in work performance Problems with interpersonal relationships Mood swings and irritability Lower tolerance of frustration and impatience Disinterest Isolation.

http://www.betterhealth.vic.gov.au/bhcv2/bhcarticles.nsf/pages/Work-related_stress?open

Work-related stressors related to poor mental health

- Precarious Employment Arrangements (short-term contracts, part-time work, independent contractors)
- Long Work Hours
- Job Strain
- Effort-Reward Imbalance
- Work-Family Imbalance
- Emotional Labor
- Workplace Bullying
- Organizational Injustice/Fairness

IV. Work Stress Research

Occupational Epidemiology of Mental Health

a. Measurement of Mental Health
b. Contextual Factors – SES, race/ethnicity, gender
c. Epidemiological evidence
    - Precarious Employment/Job Insecurity
    - Organizational Change (e.g. downsizing)
    - Long Work Hours
    - Job strain
    - Effort-reward imbalance
    - Work-Family Conflict/Spillover
    - Emotional labor
    - Workplace Bullying

c. Limitations of Research
d. Implications for Intervention: What to do?

a. Measurement

Anxiety

Depression

Psychological distress

Burnout

Measuring Anxiety

- DASS -Depression, Anxiety, Stress Scales (42 items)
- *Anxiety sub-scale (14 items)*
  - *apprehensive, panicky*
  - *trembly, shaky*
  - *aware of dryness of the mouth, breathing difficulties, pounding of the heart, sweatiness of the palms*
  - *worried about performance and possible loss of control*

Measuring Depression

- Disorder: usually a clinical diagnosis – e.g. *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* (DSM IV)
- Depressive symptoms: Numerous measures for depression including the CES-D, Beck Depression Inventory (BDI), the Depression Rating Scale (HAM-D), the Profile of Mood POMS) etc.

Center for Epidemiologic Studies Depression Scale (CES-D), NIMH

Below is a list of the ways you might have felt or behaved. Please tell me how often you have felt this way during the past week.

	During the Past Week			
	Rarely or none of the time (less than 1 day)	Some or a little of the time (1-2 days)	Occasionally or a moderate amount of time (3-4 days)	Most or all of the time (5-7 days)
1. I was bothered by things that usually don't bother me.	☐	☐	☐	☐
2. I did not feel like eating; my appetite was poor.	☐	☐	☐	☐
3. I felt that I could not shake off the blues even with help from my family or friends.	☐	☐	☐	☐
4. I felt I was just as good as other people.	☐	☐	☐	☐
5. I had trouble keeping my mind on what I was doing.	☐	☐	☐	☐
6. I felt depressed.	☐	☐	☐	☐
7. I felt that everything I did was an effort.	☐	☐	☐	☐
8. I felt hopeful about the future.	☐	☐	☐	☐
9. I thought my life had been a failure.	☐	☐	☐	☐
10. I felt fearful.	☐	☐	☐	☐
11. My sleep was restless.	☐	☐	☐	☐
12. I was happy.	☐	☐	☐	☐
13. I talked less than usual.	☐	☐	☐	☐
14. I felt lonely.	☐	☐	☐	☐
15. People were unfriendly.	☐	☐	☐	☐
16. I enjoyed life.	☐	☐	☐	☐
17. I had crying spells.	☐	☐	☐	☐
18. I felt sad.	☐	☐	☐	☐
19. I felt that people dislike me.	☐	☐	☐	☐
20. I could not get "going."	☐	☐	☐	☐

SCORING: zero for answers in the first column, 1 for answers in the second column, 2 for answers in the third column, 3 for answers in the fourth column. The scoring of positive items is reversed. Possible range of scores is zero to 60, with the higher scores indicating the presence of more symptomatology.

Def: Psychological Distress

- Detects signs or symptoms of mental distress – used for research purposes in place of a clinical diagnosis. It can also be used as an overall umbrella term for all mental or psychological problems.
- Many measures designed to measure signs of "distress" or "depressive symptoms" – sub-clinical

Measuring "Distress"

General Health Questionnaire (GHQ-12)

We want to know how your health has been in general over the last few weeks. Please read the questions below and each of the four possible answers. Check the response that best applies to you.

Have you recently:	Not at all (1)	No more than usual (2)	Rather more than usual (3)	Much more than usual (4)
1. Been able to concentrate on what you're doing?	❒	❒	❒	❒
2. Lost much sleep over worry?	❒	❒	❒	❒
3. Felt that you are playing a useful part in things?	❒	❒	❒	❒
4. Felt capable of making decisions about things?	❒	❒	❒	❒
5. Felt constantly under strain?	❒	❒	❒	❒
6. Felt you couldn't overcome your difficulties?	❒	❒	❒	❒
7. Been able to enjoy your normal day to day activities?	❒	❒	❒	❒
8. Been able to face up to your problems?	❒	❒	❒	❒
9. Been feeling unhappy or depressed?	❒	❒	❒	❒
10. Been losing confidence in yourself?	❒	❒	❒	❒
11. Been thinking of yourself as a worthless person?	❒	❒	❒	❒
12. Been feeling reasonably happy, all things considered?	❒	❒	❒	❒

Def: Burnout

- German psychiatrist Herbert Freudenberger originator of the burnout syndrome (1974)
- Symptoms include:
  - Predominance of fatigue symptoms
  - Atypical physical distress symptoms
  - Symptoms are work-related
  - Symptoms appear in “normal” persons who did not suffer from prior psychopathology
  - Decreased effectiveness and impaired work performance due to negative attitudes and behaviors

Measuring Burnout

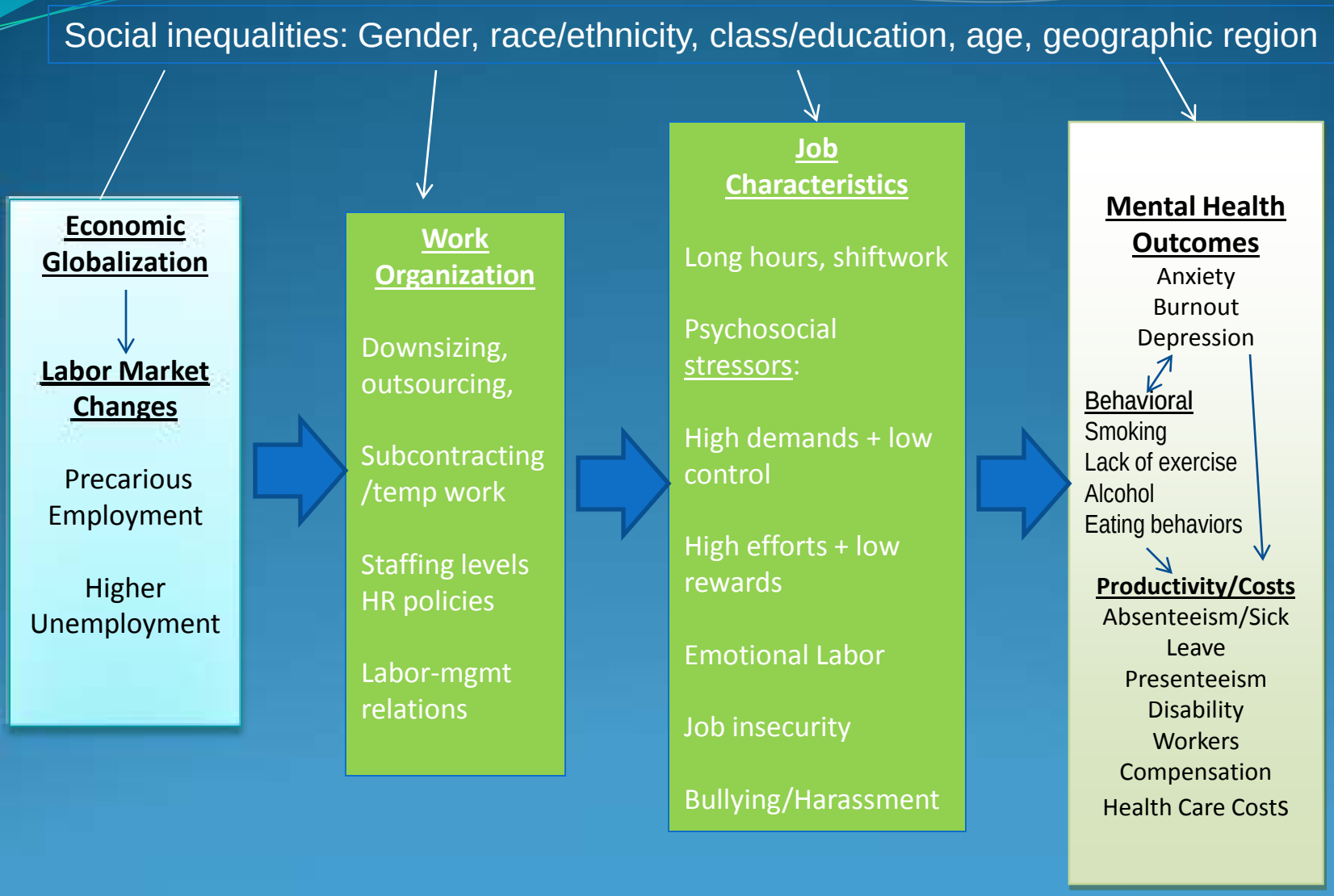
- Most commonly used measure developed by Christina Maslach

  The MBI (Maslach Burnout Inventory)surveys address three general scales/domains:

  - **Emotional exhaustion** measures feelings of being emotionally overextended and exhausted by one's work
  - **Depersonalization** measures an unfeeling and impersonal response toward recipients of one's service, care treatment, or instruction
  - **Personal accomplishment (efficacy)** measures feelings of competence and successful achievement in one's work

b. Epidemiological Evidence

Precarious Employment → Job Insecurity
Organizational Change (e.g. downsizing)
Long Work Hours
Job strain
Effort-reward imbalance
Work-Family Imbalance
Emotional labor
Workplace Bullying



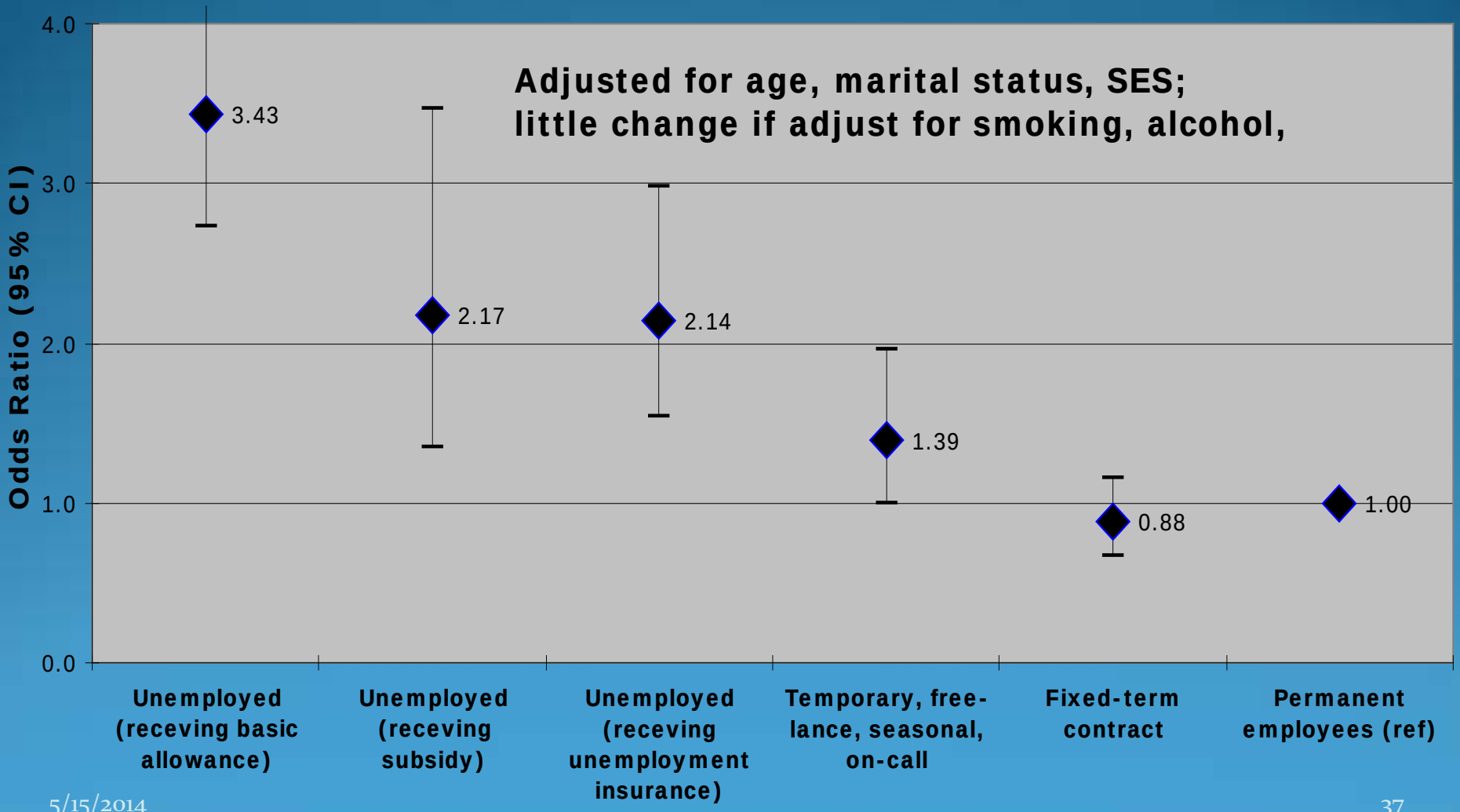
Adapted from: Landsbergis P, et al. Occupational Health Psychology (pp. 1086-1130). In Anna D (ed.) The Occupational Environment (3rd ed.). American Industrial Hygiene Association, 2011., NIOSH Work Organization Model 2002

Precarious Employment

- Precarious workers are those who fill permanent job needs but are denied permanent employee rights.
- Globally, these workers are subject to unstable employment, lower wages and more dangerous working conditions.
- Receive no social benefits and are often denied the right to join a union. Even when they have the right to unionize, workers are scared to organize if they know they are easily replaceable.
- Women, minorities and migrant workers are much more likely to fill these kinds of jobs

Precarious work and depression in the Finnish population: Men

(Virtanen et al. Int J Epidemiol 2003;32:1015–1021)



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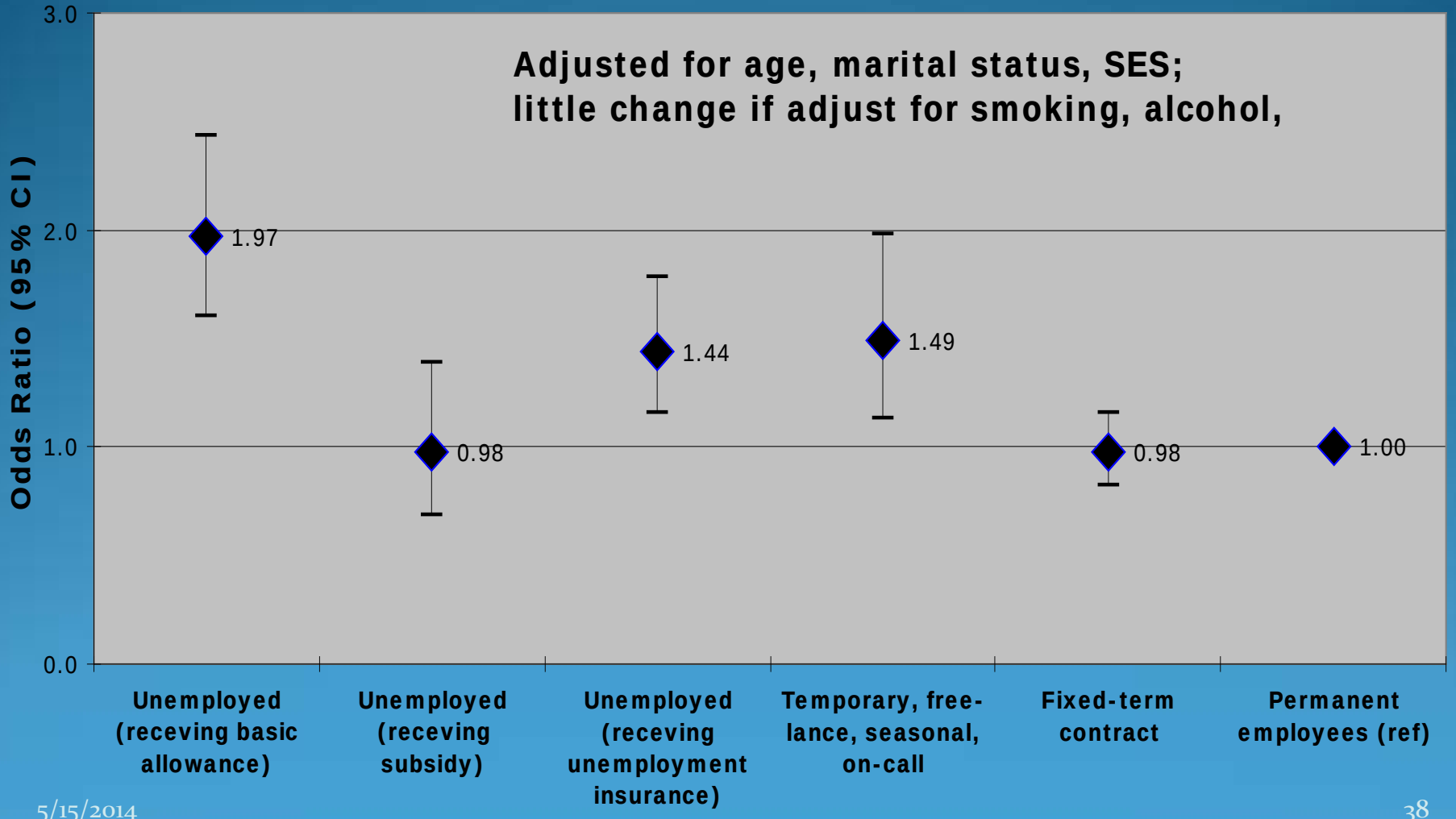


Organizational Change/Job Insecurity

Changes in the world-wide economy means many workers in the “developed” world are facing layoffs and growing job insecurity

Several prospective studies have investigated the effects on worker health of “downsizing” or “mergers” or “restructuring”

Job insecurity (Netterstrom et al SJWEH 2010)

- Danish civil servants (n=685)
- "Natural experiment" – major county/municipality restructuring – two year follow-up
- Measured incident depression using Major Depression Inventory(excluded those with MDI >19 at baseline)
- At follow-up respondents sorted into three groups:
  - **Merger**
  - **New Job**
  - **No Change**

Findings from Danish Civil Servant Study

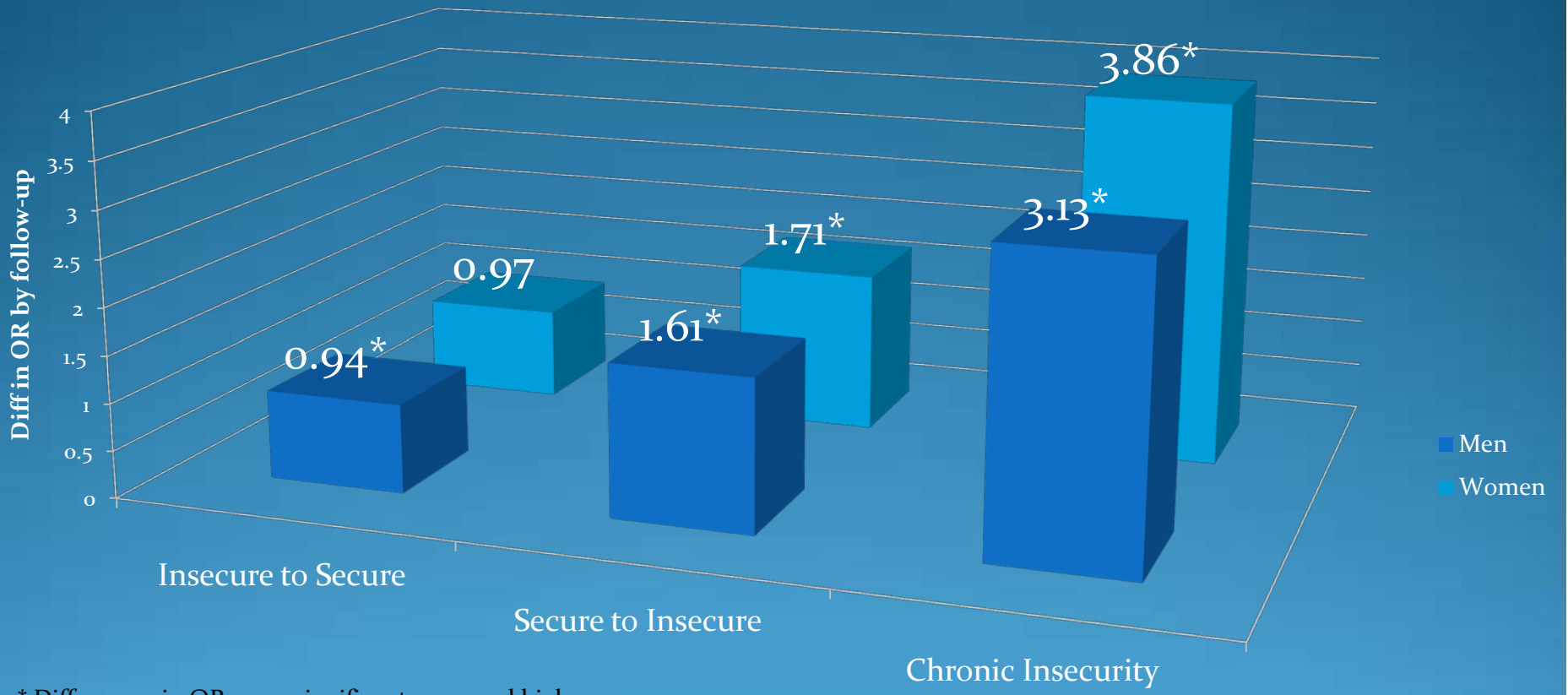
- Found no sig differences in Incidence of Major Depression between the THREE GROUPS –

- Merger
- New Job
- No Change groups

Limitations (Netterstrom et al (2010)

- Selection bias – only half of the population responded to both baseline and follow-up questionnaires (those who were depressed or left workforce might have been left out at either time point)
- At baseline, level of depressive symptoms was already elevated (higher than national average 10% vs. 8%) – ceiling effect?
- Lack of power – women's OR was 1.5 and 2.0, but not sig.
- Other?
  - No measurement of psychosocial stressors – mergers and/or a new job may not have resulted in higher strain or ERI
  - All workers had job security (other studies show uncertainty and job insecurity overtime are related to increased risk of depression Rugulies et al JECH, 2010, Ferrie et al, 2002 (Whitehall),).

Effects of loss or gain of job security and chronic job insecurity on GHQ-30 at follow-up (2.5 years), relative to continued security (Whitehall II, 931 women and 2429 men)



* Differences in OR were significant <p.01 and higher
** All analyses were adjusted sequentially for age at Phase 5, and employment grade and value of the measure of interest at Phase 1.

J E Ferrie, M J Shipley, S A Stansfeld, M G Marmot. Effects of chronic job insecurity and change in job security on self reported health, minor psychiatric morbidity, physiological measures, and health related behaviours in British civil servants: the Whitehall II study. J Epidemiol Community Health 2002;56:450–454

Long Work Hours

Working 11 hours a day may be linked with depression

January 26, 2012|By Jeannine Stein, Los Angeles Times

Working 11 or more hours a day was associated with a 2.3- to 2.5-fold increased risk of having a major depressive episode compared with those who worked a standard seven- to eight-hour day.

Virtanen et al **Overtime Work as a Predictor of Major Depressive Episode: A 5-Year Follow-Up of the Whitehall II Study**
PLoS 2012

Organizational Justice

Organizational justice

- Distributive justice
  - Fairly rewarded (similar to effort-reward imbalance)
- Procedural justice
  - Formal procedures at work (i.e., the extent to which decision-making processes include input from affected parties, are fair and consistent, and provide useful feedback as well as the possibility of appeal)
- Relational justice (Whitehall II Study, □=.72)
  - Do you ever get criticized unfairly (reverse scored)?
  - Do you get consistent information from line mgmt (your superior)?
  - Do you get sufficient information from line management (your superior)?
  - How often is your superior willing to listen to your problems?
  - Do you ever get praised for your work?

Kivimaki M, Virtanen M, Elovainio M, Kouvonen A, Vaananen A, Vahtera J. Work stress in the etiology of coronary heart disease--a meta-analysis. Scandinavian Journal of Work Environment and Health 2006;32(6, special issue)):431-442.

Org justice and Depression

AIM: Analyze if low justice at work, analyzed as aggregated workplace means, increases the risk of depression.

METHODS:

- N=4237 non-depressed Danish public employees within 378 different work units were enrolled in 2007.
- Mean levels of procedural and relational justice were computed for each work unit to obtain exposure measures that were robust to reporting bias related to depression.
- Follow-up – 2 years later in 2009, 3047 (72%) participated at follow-up.
- 58 cases of new onset depression were identified after a psychiatric interview.

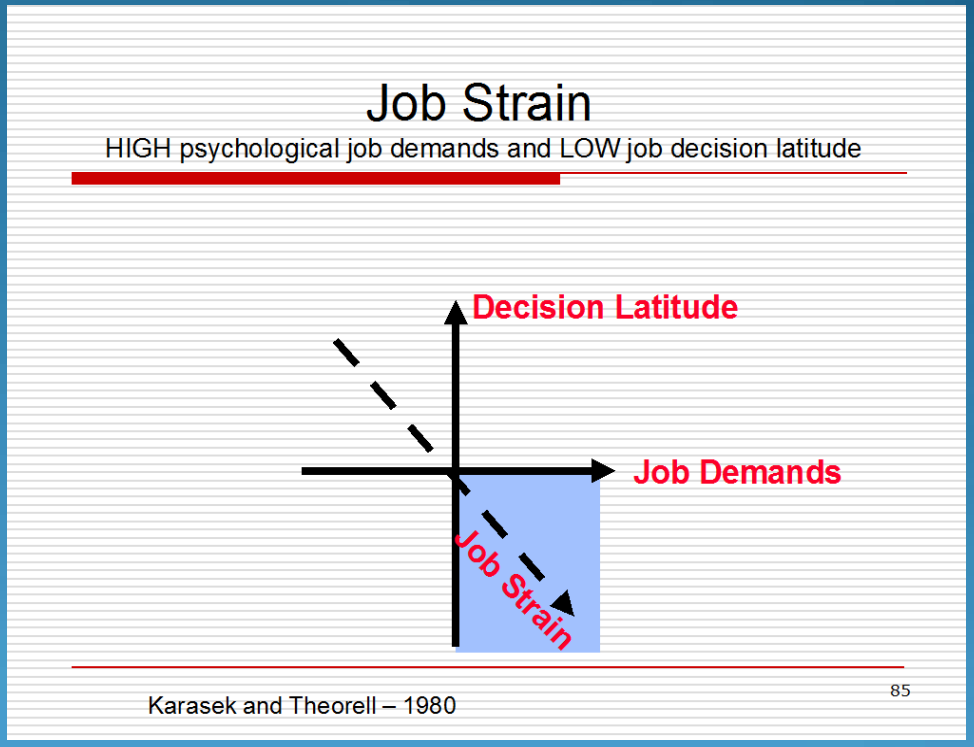
Grynderup MB et al. Work-unit measures of organisational justice and risk of depression--a 2-year cohort study. Occup Environ Med 2013 June; 70(6):380-5

RESULTS: Low Organizational Justice Predicts Onset of Depression

Working in work unit with:

- Low procedural justice (adjusted OR 2.50, 95% CI 1.06 to 5.88)
- Low relational justice (adjusted OR 3.14, 95% CI 1.37 to 7.19)

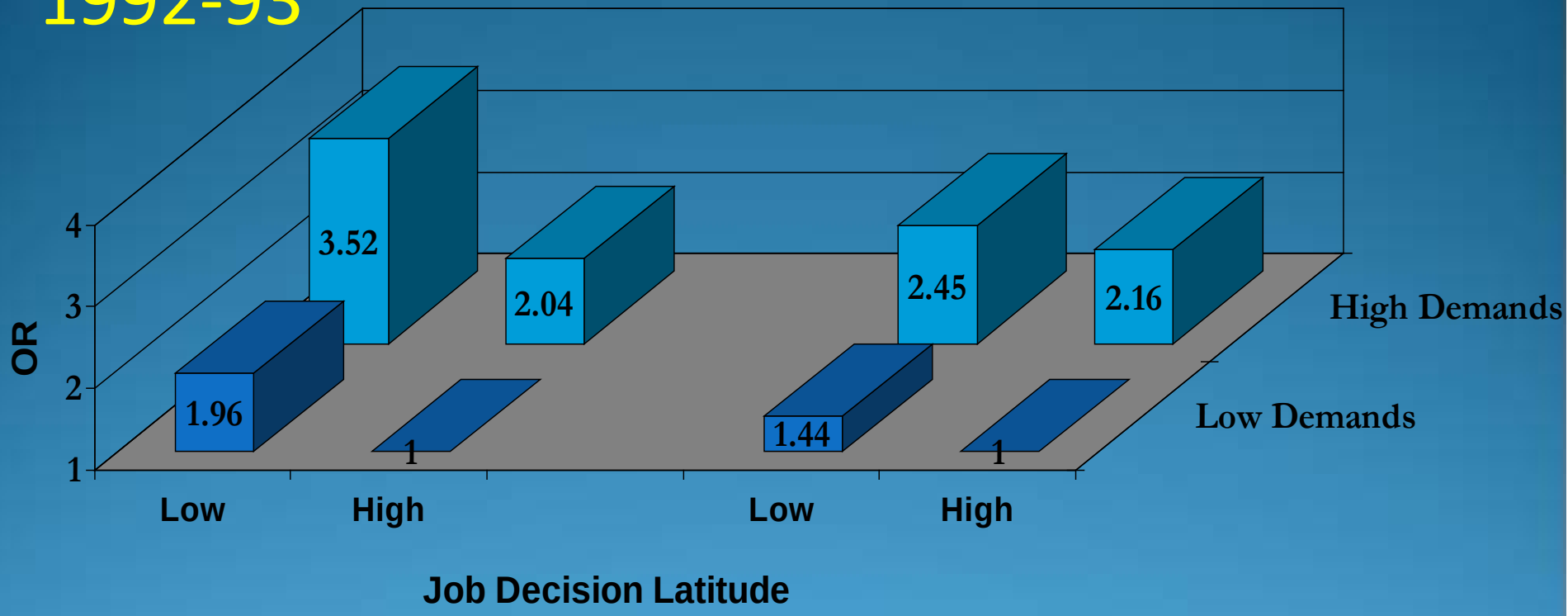
Job Strain


Job Strain
HIGH psychological job demands and LOW job decision latitude
Decision Latitude
Job Demands
Job Strain
Karasek and Theorell – 1980
85

Job Strain and Anxiety

- Primary and secondary school teachers in the UK (controlling for age, gender and occupational grade) the prevalence of severe anxiety was higher in high job strain teachers (Cropley, Steptoe and Joekes 1999)
- Employed women (n=152) with high demands and low decision latitude had increased levels of anxiety, anger, depression, and hostility (Williams, Barefoot and Blumenthal et al, 1997)
- Employed professionals in Australia (n=1188) (controlling for gender, marital status, education, employment status, major life events and negative affectivity)high job strain associated with anxiety (OR = 3.42 (1.62 to 7.19)) (D'Souza et al. 2003).

High psychological distress (top 20% of PSI) among 2,889 Quebec white-collar workers, 1992-93



Crude Association

Bourbonnais R, Brisson C, Moisan J, Vezina M. *Scand J Work, Environ Health* 1996; 22:139-45.

Adjusted for Age, Gender, Employment Status, Occupation, Social Support, Cynicism, Hostility, Domestic Load, Past Year Stressful Life Events

Job strain and psychological well-being

Outcome	JDC Model Strain	JDC Model Buffer	JDCS Model Strain	JDCS Model Buffer	Total N of Studies
Psych well-being	28/41	15/31	9/19	2/5	43
Job satisfaction	18/30	10/23	8/14	2/6	31
Job "burnout"	3/4	0/4	1/1	0/2	4
Job-related Psych well-being	7/8	1/2	1/2	1/1	8

(ratio of supportive to total studies)

Van Der Doef M, Maes S. The job demand-control(-support) model and psychological well-being: a review of 20 years of empirical research. Work & Stress 1999;13(2):87-114.

Job Strain and Burnout

- 4 cross-sectional studies assessed the relationship between demands-control and support and burnout. Most showed support for the hypothesis, except 1 in a sample of construction workers.

- One showed a positive relationship between ISOSTRAIN (job strain and low support) and burnout.

Van Der Doef M, Maes S. The job demand-control(-support) model and psychological well-being: a review of 20 years of empirical research. Work & Stress 1999;13(2):87-114.

Ahola et al Contribution of Burnout to the Association Between Job Strain and Depression: the Health 2000 Study. JOEM (2006)

Design: Cross-sectional survey

Sample: A representative sample of 3270 Finnish employees aged 30 to 64

Measures:

- Maslach Burnout Inventory–General Survey
- Beck Depression Inventory (depressive symptoms)
- Composite International Diagnostic Interview *(depressive disorder)*

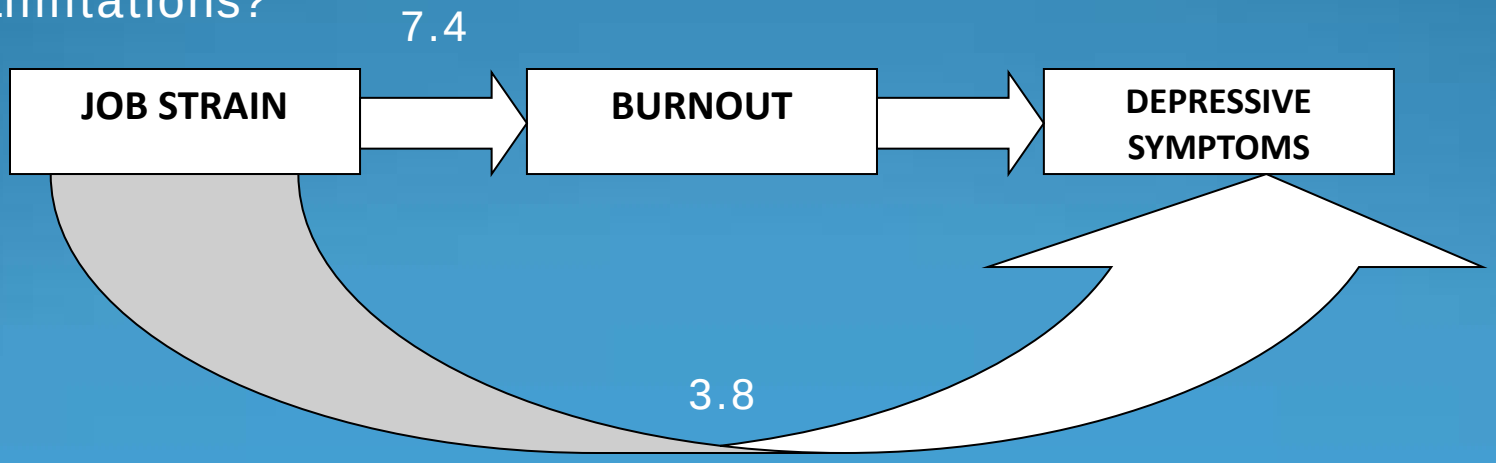
J Occupational and Environmental Medicine • Volume 48, Number 10, October 2006

Job strain, burnout & depression

- The risk for depressive symptoms and for depressive disorders of high strain was reduced by 69% or more after adjusting for burnout.

- Burnout is strongly related to job strain and may in part mediate the association between job strain and depression.

- Limitations?

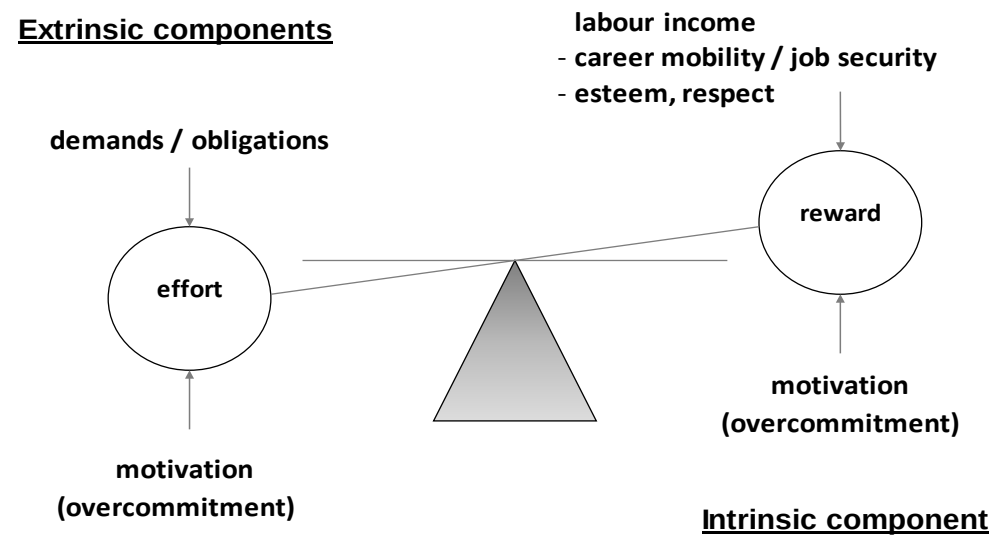


Ahola K, Honkonen T, Kivimaki M. et al. Contribution of burnout to the association between job strain and depression: the Health 2000 study. JOEM Volume 48, Number 10, October 2006

Effort-Reward Imbalance

The model of effort-reward imbalance

Modified from: Siegrist J (2002) Effort-reward imbalance at work and health. In: P. Perrewe, D. Ganster (eds.) Historical and Current Perspectives on Stress and Health (pp.261-291). New York: JAI Elsevier.



ERI and Depression

- A review of ERI and psychological outcomes included 16 studies and found that most studies assessing ERI and (psycho)somatic symptoms showed a positive association.
- Def: Psychosomatic symptoms ranged from MSD to depression.
- Employees exposed to ERI in these studies had an elevated risk of 1.44–18.55 for (psycho)somatic symptoms.

van Vegchel N, de Jonge J, Bosma H, Schaufeli W. Reviewing the effort-reward imbalance model: drawing up the balance of 45 empirical studies. Social Science Medicine 2005 Mar; 60(5):1117-31

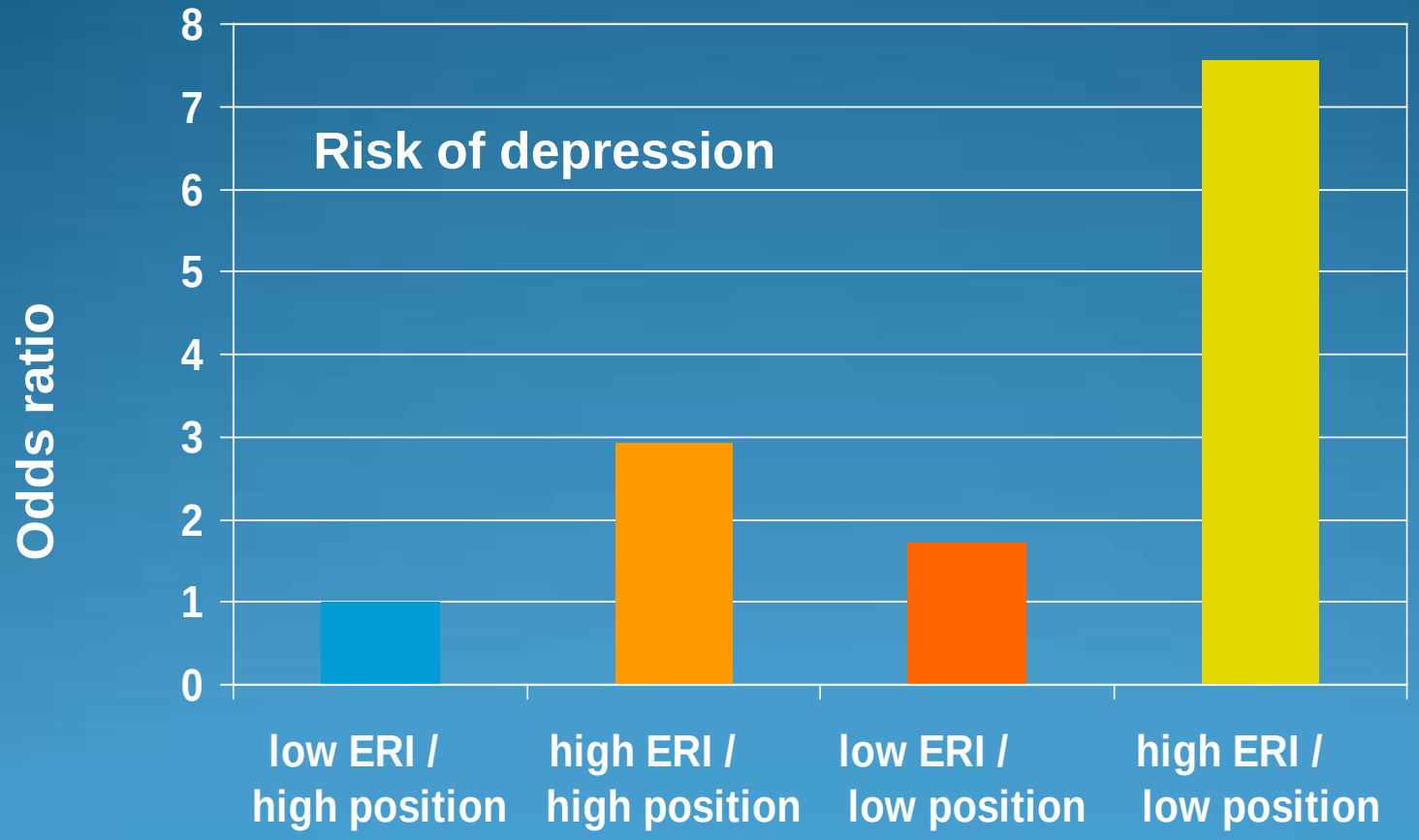
ERI and Burnout

- Van Vegchel et al (2005) also found 7 studies were concerned with job-related well-being (e.g. burnout)
- 6/7 studies that looked at the effort x reward hypothesis, found a positive association with emotional exhaustion, and more limited support for depersonalization.

van Vegchel N, de Jonge J, Bosma H, Schaufeli W. Reviewing the effort-reward imbalance model: drawing up the balance of 45 empirical studies. Social Science Medicine 2005 Mar; 60(5):1117-31

Effort-reward imbalance (ERI), occupational position and depression

(HNR Study; baseline; N=1811 men and women aged 45-65)



N. Wege, N. Dragano, J. Siegrist (2007), JECH (in press).

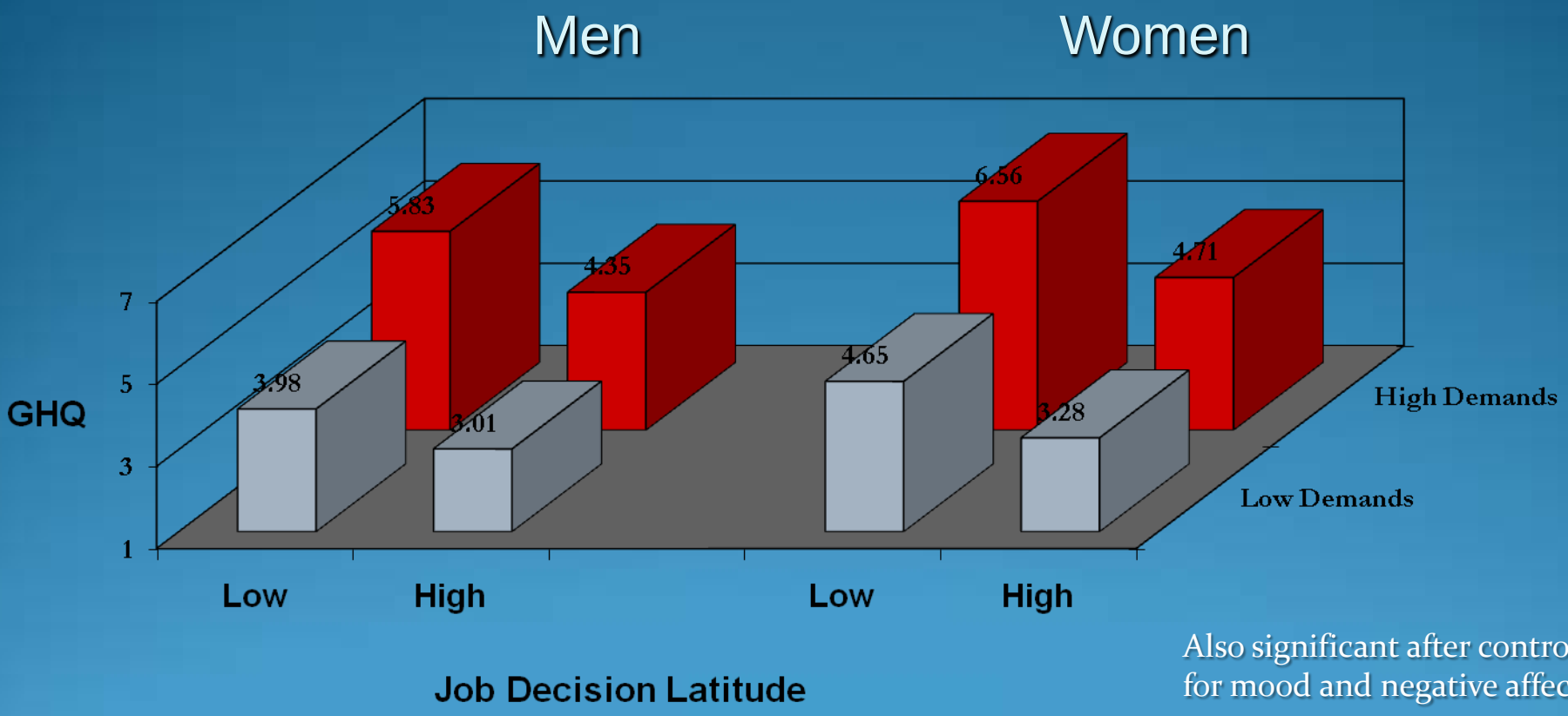
Break

Contextual factors

- How do gender, race/class/SES act as mediators of the relationship between work stressors and mental health
- "Intersectionality:"
  - Being a woman, a person of color, and poor can dramatically increase your risk of exposure to poor working conditions and poor mental health.

Psychiatric disorder (30-item GHQ) among 10,314 British civil servants

(Adjusted for age, employment grade)



Also significant after controlling for mood and negative affectivity

Stansfield SA, North FM, White I, Marmot MG. *J Epidemiol Commun Health* 1995;49:48-53

Gender and Work Stressors

- Occupational sex segregation

  - "men's jobs" and "women's jobs" - jobs in which women predominate generally have lower decision latitude, on average, than men's jobs (1) – but this is possibly controlled for by "civil servant" study – mainly white collar workers, AND employment grade?

- Discrimination and harassment

  – negative sex stereotyping, isolation, and sexual objectification – and sexual harassment is associated with depression, anxiety, somatization and low self esteem

- Work-Family Spillover

  – women still do a majority of child care, elder care and domestic work in the home – "the second shift"…

(1) Josephson et al., 1999; Karasek & Theorell, 1990; Matthews, Hertzman, Ostry, & Power, 1998; Nordan
Vermeulen & Mustard, 2000.
(2) Klonoff, Landrine & Campbell, 2000; Landrine, Klonoff, Gibbs, Manning, & Lund, 1995; Swim et al., 20
Lenhart, 1996; Parker & Griffin, 2002

Work-Family Conflict

"A form of inter-role **conflict** in which the role pressures from the work and family domains are mutually incompatible so that participation in one role [home] is made more difficult by participation in another role [work]"

WFC Implications

- 70% of U.S. men and women report some interference between work and non-work
- Can manifest as time strains, missed work or family activities, or spillover of stress
- Adaptive strategies to reduce include: one spouse existing the labor force, reducing hours, working different shifts
- → reinforcing gender inequality because women are more likely to leave jobs or cut back at work

Theoretical frameworks

Scarcity hypothesis: a person has limited amount of time and energy to engage in roles ➔ strain is inevitable

Enhancement Hypothesis: occupying multiple roles can be beneficial (e.g. gaining knowledge or skills in one role that can be used in another role)

Work → Family Conflict (WFC)

- After work, I come home too tired to do some of the things I'd like to do.
- On the job I have so much work to do that it takes away from my personal interests.
- My family/friends dislike how often I am preoccupied with my work while I am at home.
- My work takes up time that I'd like to spend with family/friends.

(Response options: strongly disagree, disagree, agree, strongly agree)

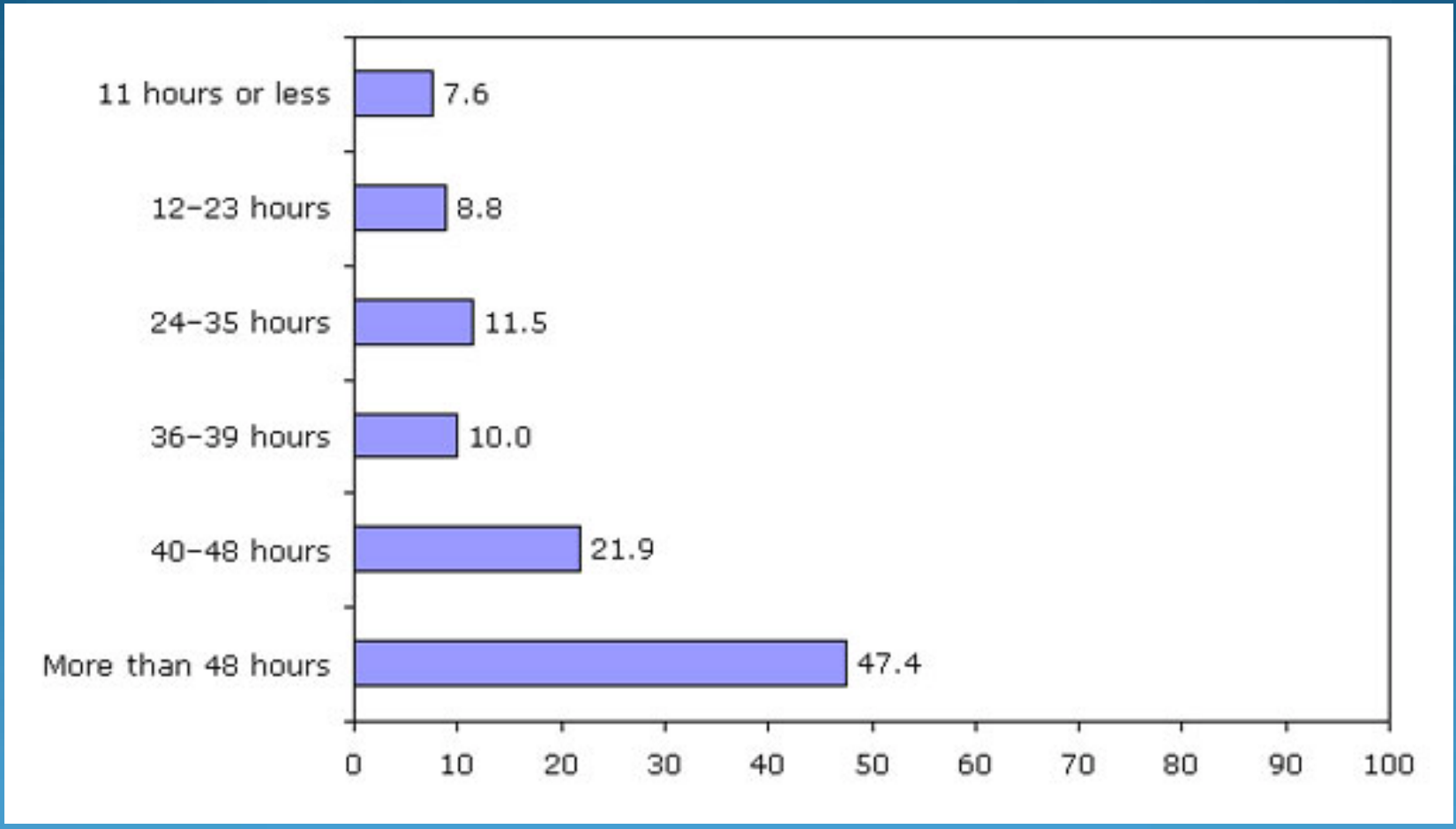
Gutek BS. Rational Versus Gender Role Explanations for Work-Family Conflict. Journal of Applied Psychology 1991;76:560-568.

Family → Work Conflict (FWC)

1. The demands of my family or spouse/partner interfere with work-related activities.
2. I have to put off doing things at work because of demands on my time at home.
3. Things I want to do at work don't get done because of the demands of my family or spouse/partner.
4. My home life interferes with my responsibilities at work such as getting to work on time, accomplishing daily tasks, and working overtime.
5. Family-related strain interferes with my ability to perform job-related duties

Netemeyer et al Journal of Applied Psychology 1996. Vol. 81. No. 4,400-410

Work-Family Conflict % by hours worked/week



Source: Statistics Norway (Statistisk sentralbyrås, SSB), Level of Living Survey: Working Conditions, 2006 http://www.eurofound.europa.eu/ewco/2007/12/NO0712029I.htm

Table 2. Longitudinal regression analysis predicting self-report health outcomes

	Follow-up health outcomes		
Baseline predictors	Depression	Poor physical health	Heavy alcohol use
Health outcome	.46**	.48**	.66**
Gender[a]	.01	.01	.00
Race[b]	.01	.02	−.05
Age	.03	.07	−.07
Education	−.15*	−.15*	−.08
Family income	.02	.01	.06
Work → family conflict	.00	−.02	.12*
Family → work conflict	.21**	.15*	−.07
Total R^2	.38**	.33**	.53**

*$p < .01$; **$p < .001$.
[a]0 = men, 1 = women.
[b]0 = white, 1 = minority.
Note. $N = 267$. Standardized regression coefficients are reported.

Frone et al Journal of Occupational and Organizational Psychology 1997, 70: 325-335

WFC Positive Spillover

- Work–family positive spillover (Edwards & Rothbard,
- Work–family facilitation (Grzywacz, 2002)
- Work–family enrichment (Greenhaus & Powell, 2006)
- Multi-dimensional WFC positive spillover (Hanson, Hammer, Colton 2009)

Longitudinal effects of WFC and Positive Spillover on Depressive Symptoms among Dual-Earner Couples

Hammer et al J Occup Health Psychol. 2005 Apr;10(2):138-54.

This study assessed longitudinal and cross-sectional relationships between work-family conflict, positive spillover, and depression in a national sample of 234 dual-earner couples.

Findings:

a) positive spillover has a stronger impact on depression than does work-family conflict

b) the effects of spouses' positive spillover were more strongly related to decreased depression than were the effects of one's own positive spillover.

Emotional Labor

- Sociologist Arlie Hochschild developed the concept of emotional labor (1983) to describe the "management of human feeling" in human service-oriented work such as flight attendants.

Work stressors and the growing service sector

- Emotional labor requires workers to "create a publicly observable facial and bodily display" one that provokes positive responses in customers or clients (Hochschild, 1983).
  - Requirement to display positive feelings
  - Requirement to suppress negative feelings
  - Emotional dissonance: surface acting and deep acting

Measuring Emotional Labor

- Emotional Demands (Job-focused emotional labor):
  - Frequency, duration, variety and intensity

    "My work is emotionally demanding"

    "I spend X number of minutes/hours during my work day dealing with emotional situations on the job"
- Employee-focused emotional labor:
  - Surface Acting: *"I put on an appearance in order to express the right emotions I need to display for my job."*
  - Deep Acting: *"I make an effort to actually feel the emotions I need to display toward the public/victims."*

Emotional Labor and Burnout

(Brotheridge & Grandey 2002)

- Job-focused emotional labor (e.g. emotional demands) not associated with emotional exhaustion or depersonalization, but were related to high personal accomplishment.
- Employee-focused emotional labor (e.g. the measurement of display rules to hide negative emotions or display positive emotions) was significantly related to emotional exhaustion and depersonalization.

Survey says “faking” feelings may bring on nurse burnout

Nurses who don't have a natural ability to control their emotions and who feel like they're regularly “faking” feelings at work are more likely to experience burnout, depression and be absent, according to recently published research in the *International Journal of Nursing Studies*.

Workplace Bullying

In 2011, half of employees in one survey said they were treated rudely at least once a week, an increase of 25% from 1998.

What is Workplace Bullying?

- Def: “Repeated, health-harming mistreatment of one or more people that can include verbal abuse, offensive nonverbal behaviors, or interfering with someone's ability to get work done.”
  - 37% of American workers, 54 million people have been bullied at work
  - 72% of bullies are bosses! The stereotype is real!
  - Women are targeted more frequently (57% of cases)
  - In 62% of cases employers worsen the problem or simply do nothing.

Workplace Bullying Institute and Zogby International. U.S. Workplace Bullying Survey 2007

Consequences

- Hostile workplaces often lead to less productive employees and therefore less successful companies
- Employees who feel undermined at work are more likely to be stressed and to miss work for health reasons
- Witnessing someone get bullied at work is linked to depressive symptoms.

Why is workplace bullying on the rise in the U.S.?

- **Recent economic downturn has put undue stress on bosses, causing them to lash out at employees**.
- Many workplace bullies also score high on tests of narcissism and self-orientation.
- Some of us are so overwhelmed by our work responsibilities that we don't even realize when we're being rude to others
- Currently, federal law doesn't prohibit workplace bullying, but individual states are pushing to change that.

Bullying vs. Illegal Harassment

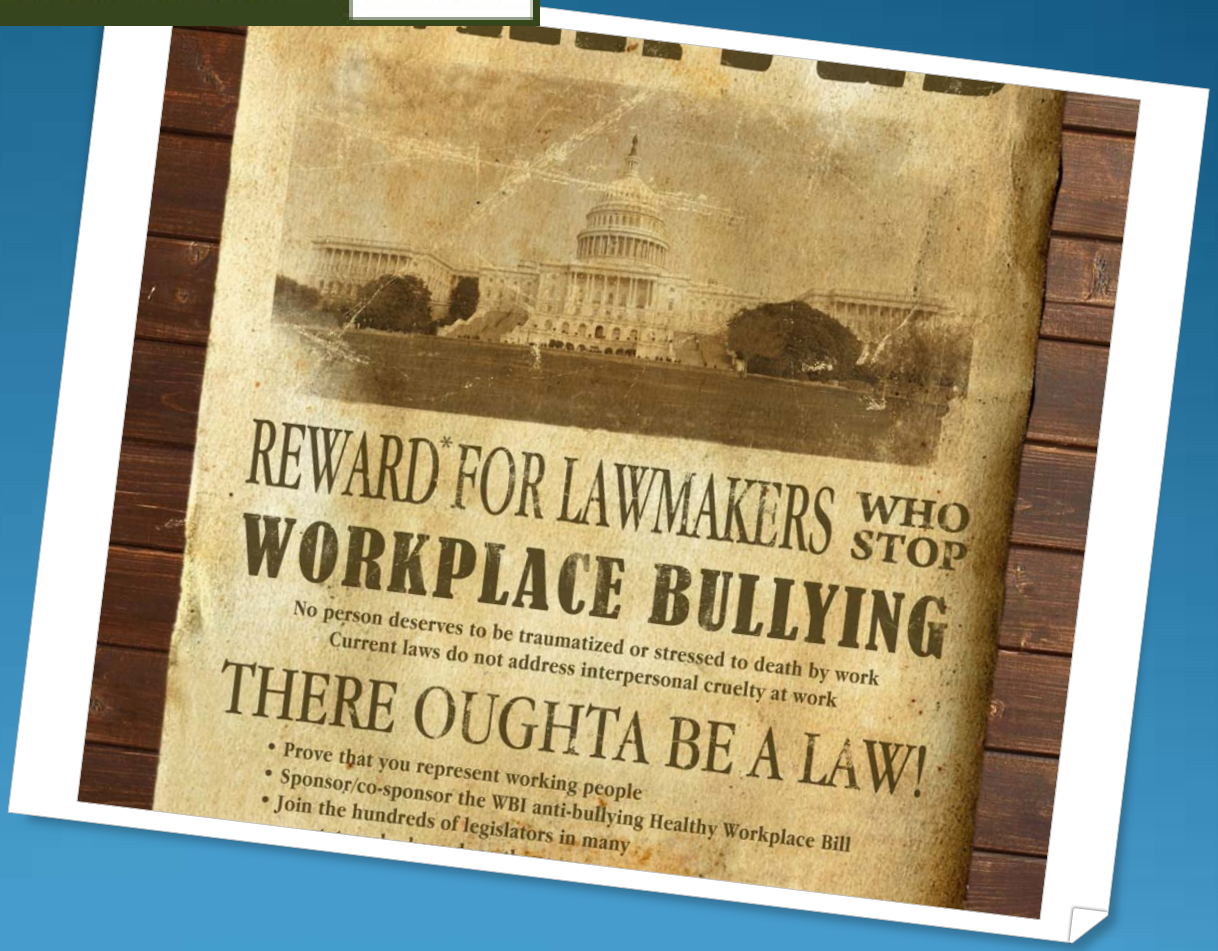
- Harassment is actionable in a court of law if:
  - One is a member of a protected group (on the basis of gender or race or religion)
  - If one's civil rights have been violated

- Bullying crosses social statuses
- Current discrimination and harassment laws rarely address bullying concerns. Bullying is four times more prevalent than illegal discrimination, but is still legal in the U.S.

Healthy Workplace Bill

http://www.healthyworkplacebill.org/

26 States since 2003 have introduced the HWB -- No laws yet enacted
15 states with 21 bills active



The Healthy Workplace Campaign
Dr. Gary Namie, National Director

An International Anti-Workplace Bullying Movement

- The U.S. is the last of the western democracies to introduce a law forbidding bullying-like conduct in the workplace.
- Scandinavian nations have explicit anti-bullying laws (since 1994). As well as Great Britain (1997), Australia (2005)

http://www.healthyworkplacebill.org/international.php

"Maladaptive" Coping Strategies

- While many coping strategies (including social support) may help to buffer the effect of stress, some coping strategies may result in greater risk of chronic illness, such as:
  - Smoking
  - Alcohol consumption
  - Drug abuse
  - Over-eating
- Evidence is building that suggests a strong relationship between exposure to work stress and adverse health behaviors.
- Adverse health behaviors are often co-morbid with depressive disorders and other mental health problems

Job Strain and Adverse Health Behaviors (Kouvonen et al 2007)

- Objective: To explore the association between job strain and the co-occurrence of adverse health behaviors; smoking, heavy drinking, obesity, and physical inactivity.
- Methods: The authors studied cross-sectional data of 34,058 female and 8154 male public sector employees in Finland.
- Results: High job strain and passive jobs were associated with 1.3 to 1.4 times higher odds of having >=3 (vs 0) adverse health behaviors.

Kouvonen et al. **Job Strain and Adverse Health Behaviors: The Finnish Public Sector Study.** JOEM 49(1):68-74, January 2007.

V. Research Limitations

What are the main limitations with the evidence presented so far?

- Cross-sectional studies show associations, not causation
- Cross-sectional studies of work and mental health/illness– can't rule out prior risk of mental illness as an influence.
- Self-reported work stressors and health outcome may not be independent, can lead to circular reasoning.
- Longitudinal studies needed to assess effects of work stressors on mental health.

Systematic Review article: Longitudinal evidence (Bonde JOEM 2008)

- Review of follow-up studies of risk of major depressive disorder/depressive symptoms and specific psychosocial work stressors (JCQ, ERI, Support).
- 16 studies; average sample size = 3,400 people
- ORs averaged across relevant studies:

	Odds Ratio (95% CI)
Demands	1.31 (1.08-1.59)
Control	1.20 (1.08-1.39)
Social Support	1.44 (1.24-1.68)
Organizational justice	1.40 (1.00-2.40)
Bullying	2.30 (1.50-3.40)

Bonde JPE. Psychosocial factors at work and risk of depression: a systematic review of the epidemiological evidence. *Occup. Environ. Med.* 2008;65;438-445; originally published online 16 Apr 2008; doi:10.1136/oem.2007.038430

Discussion of Bonde article

- Variation in baseline prevalence of depressive disorders – due to multiple measures (clinical diagnosis, depression scales) but still found that risk not affected by type of measure.

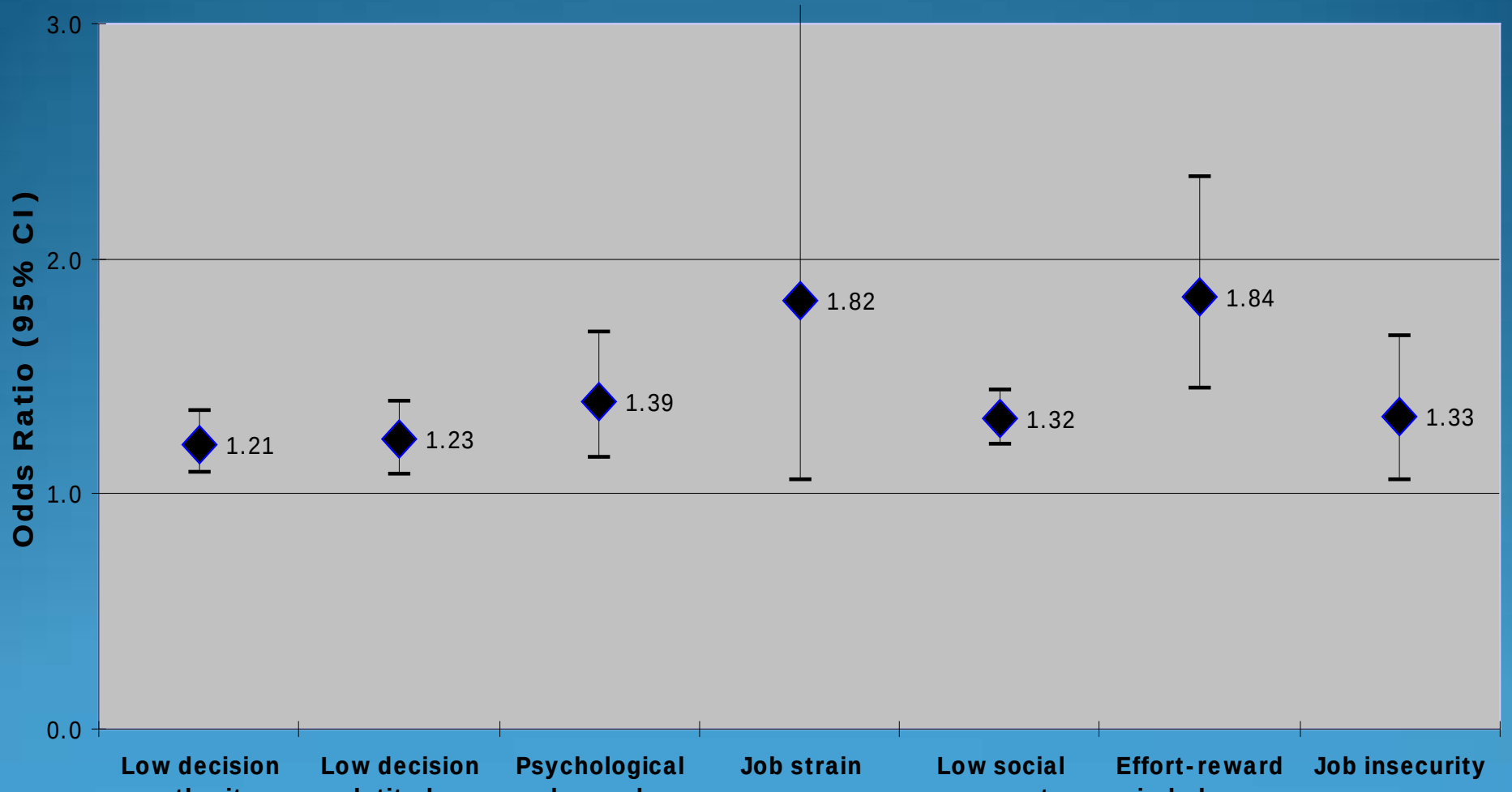
- Most studies excluded depression **at baseline**, adj. risk estimates for effects of gender, age, educational level, income, employment status and marital status. Some adjusted for personality, domestic stressors and life events

- Few adjusted for family history, prior onset, and serious chronic disease, or sub-clinical symptoms of depression which could all affect perception of demands and control.

- NO interaction effect of demands/control (job strain) or effort/reward (ERI) – Only a few studies looked at interactions. More study is necessary (but did not include important articles publishing prospective data from the Whitehall cohort study of British civil servants e.g. Stansfeld et al 1999)

Meta-analysis of the association of work stressors and common mental disorders

(Stansfeld SL, Candy B. Scand J Work Environ Health 2006;32(6,special issue):443-462.)



Stansfeld & Candy, 2006

Systematic review & meta-analysis of 11 longitudinal studies found:

- *"robust and consistent evidence that high demands, low control, and the combination of the two [job strain] are prospective risks factors for common mental disorders"*
- *Job strain roughly doubles the risk of depression*

How much mental illness is work-related? (LaMontagne 2012)

- What is the Population Attributable Risk (PAR) method?

...the portion of the incidence of a disease due to a particular exposure or risk factor. The incidence of a disease in a population that is eliminated when an exposure is eliminated.

- Ex. Smoking PAR% of 32% for pneumonia among adults.

- Researchers have calculated the PAR% for depression if job strain were eliminated.

Job Strain-Attributable Depression (PAR%): Estimates by Gender

AUSTRALIA

- Men 13.2% [95% CI 1.1, 28.1]
- Women 17.2% [95% CI 1.5, 34.9]

LaMontagne et al, 2008

FRANCE

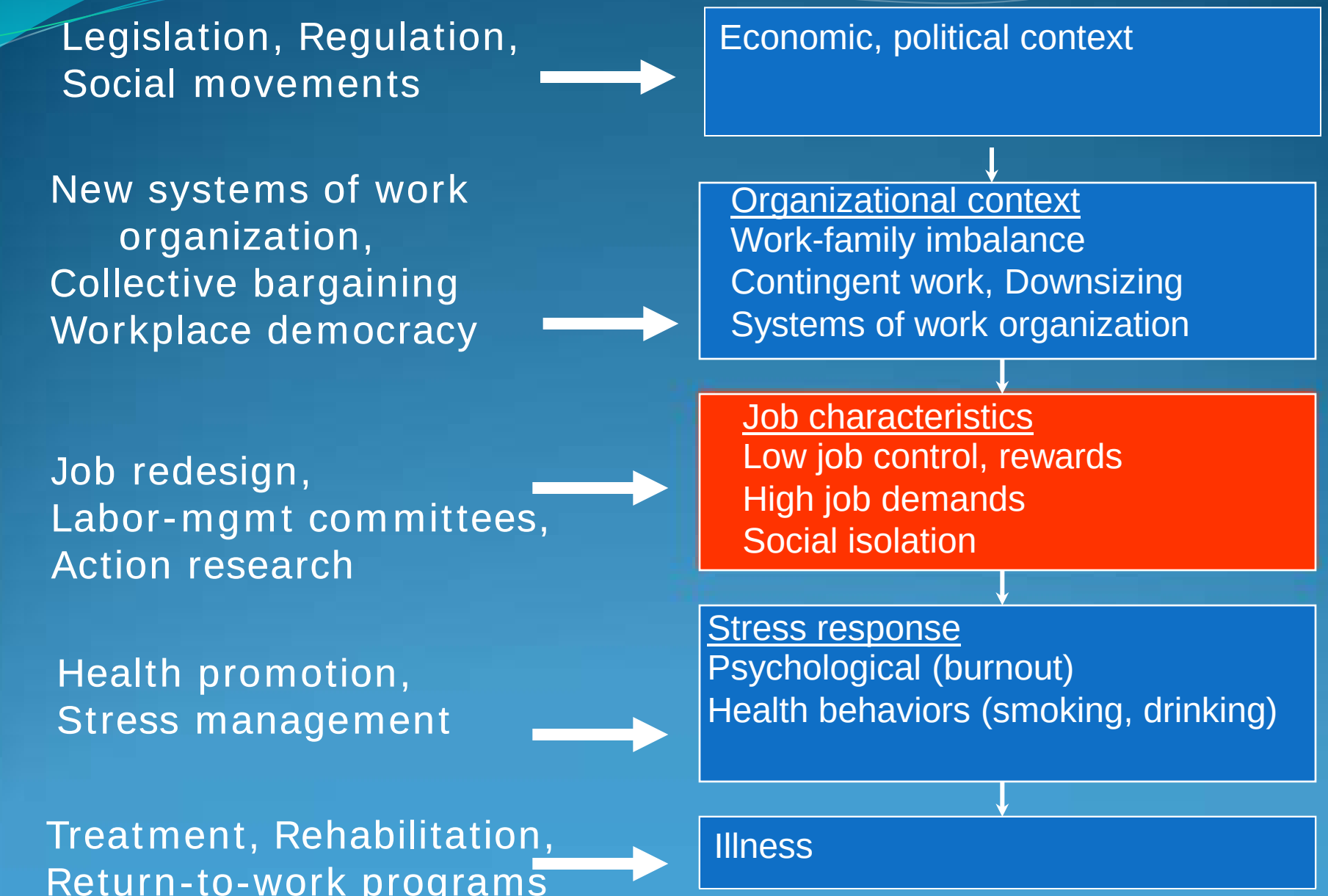
- Men 10.2–31.1%
- Women 5.3–33.6%

Sultan-Taieb et al, 2011

IV. What to do?

Implications for Intervention

How do we go about making change?



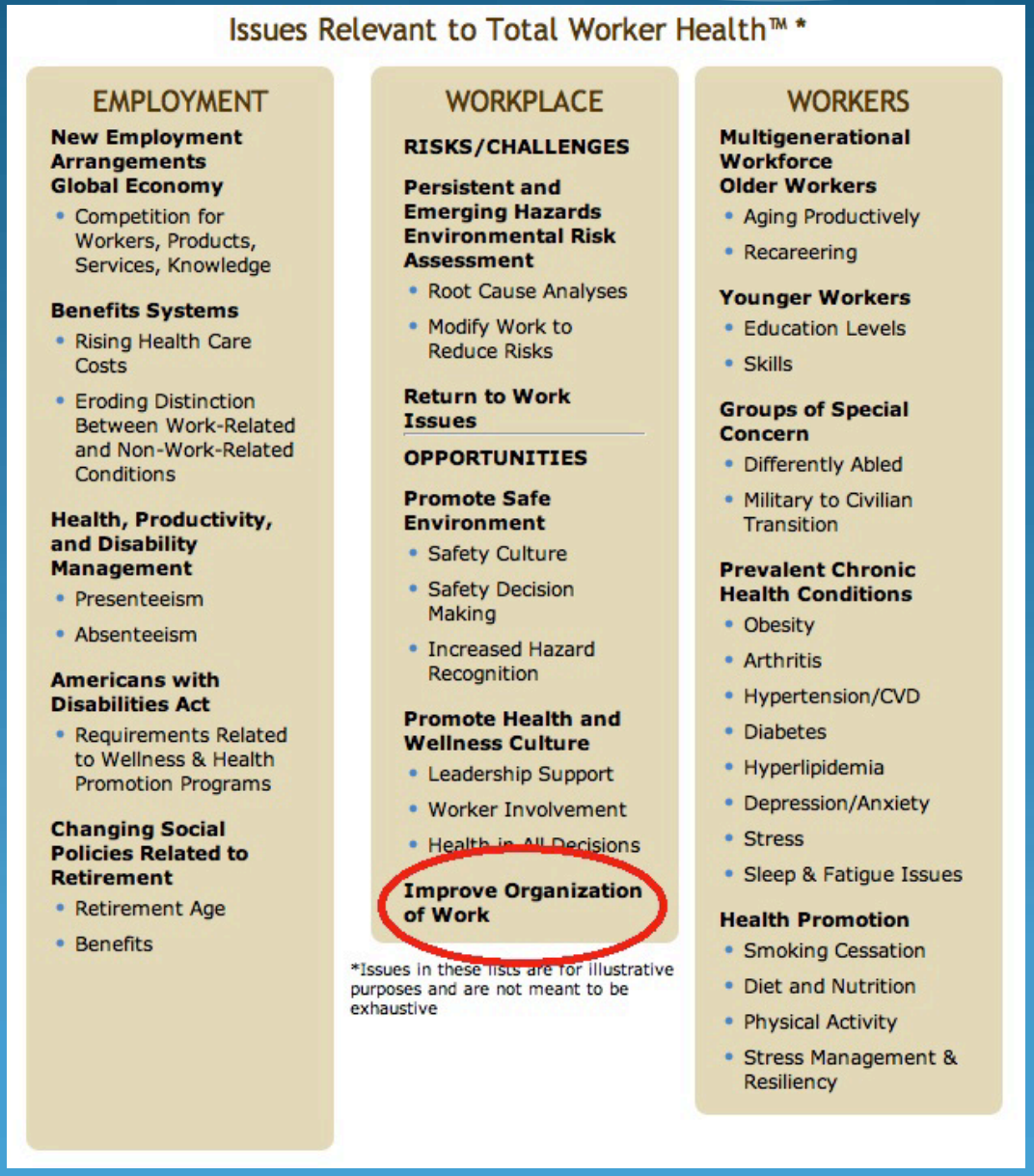
Self-Help – Individual Level

Think about the changes you need to make at work in order to reduce your stress levels and then take action. Some changes you can manage yourself, while others will need the cooperation of others.

- Talk over your concerns with your employer or human resources manager.
- Prioritize Work Tasks – Stay organized.
- Take care of yourself. Eat a healthy diet and exercise regularly.
- Consider the benefits of regular relaxation. You could try meditation or yoga.
- Make sure you have enough free time to yourself every week.
- Don't take out your stress on loved ones – ask for their support.
- Avoid excessive drinking and smoking.
- Seek professional counselling from a psychologist.
- Consider another job or a career change -- seek advice from a career counselor.

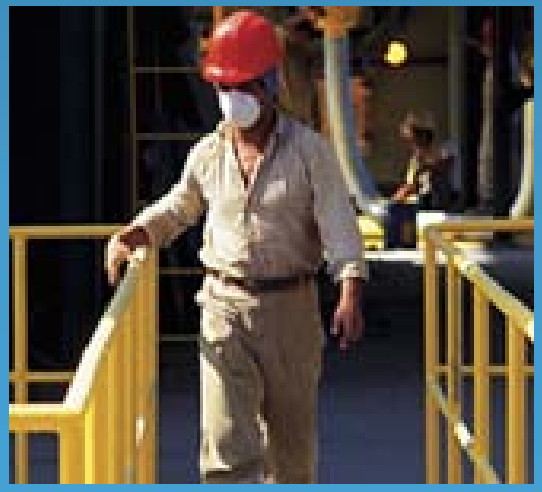
Organizational Approaches

- Prevention approaches: reduce *work*-related stressors:
  - "Total Worker Health"- NIOSH proposes combining OSH and Health Promotion: http://www.cdc.gov/niosh/TWH/
  - CDC – Workplace Health Promotion: http://www.cdc.gov/workplacehealthpromotion/implementation/


Issues Relevant to Total Worker Health™ *
EMPLOYMENT
New Employment Arrangements Global Economy
• Competition for Workers, Products, Services, Knowledge
Benefits Systems
• Rising Health Care Costs
• Eroding Distinction Between Work-Related and Non-Work-Related Conditions
Health, Productivity, and Disability Management
• Presenteeism
• Absenteeism
Americans with Disabilities Act
• Requirements Related to Wellness & Health Promotion Programs
Changing Social Policies Related to Retirement
• Retirement Age
• Benefits
WORKPLACE
RISKS/CHALLENGES
Persistent and Emerging Hazards Environmental Risk Assessment
• Root Cause Analyses
• Modify Work to Reduce Risks
Return to Work Issues
OPPORTUNITIES
Promote Safe Environment
• Safety Culture
• Safety Decision Making
• Increased Hazard Recognition
Promote Health and Wellness Culture
• Leadership Support
• Worker Involvement
• Health in All Decisions
Improve Organization of Work
*Issues in these lists are for illustrative purposes and are not meant to be exhaustive
WORKERS
Multigenerational Workforce Older Workers
• Aging Productively
• Recareering
Younger Workers
• Education Levels
• Skills
Groups of Special Concern
• Differently Abled
• Military to Civilian Transition
Prevalent Chronic Health Conditions
• Obesity
• Arthritis
• Hypertension/CVD
• Diabetes
• Hyperlipidemia
• Depression/Anxiety
• Stress
• Sleep & Fatigue Issues
Health Promotion
• Smoking Cessation
• Diet and Nutrition
• Physical Activity
• Stress Management & Resiliency

NIOSH: TOTAL WORKER HEALTH™

Integrating:
Health Promotion with Health Protection (Occupational Health)



http://www.cdc.gov/niosh/twh/

Work organization minimized in TWH policy/research documents

- "Work organization":
  - 9 times in the entire *NIOSH TWH Research Compendium* vs. "health promotion/behaviors" = 186 times **just in the first 50 pages**
  - 40 times in all other TWH documents/websites vs. "health promotion/behaviors" = 230 times

- "Job/work stress/strain, psychosocial hazards etc."
  - only 35 times in <u>all documents</u> vs. "health protection, (worker) safety" = 306 times

Quebec hospital workers: Reducing psychological distress

- Employee surveys/interviews (job stressors, anxiety, depression)
- Labor-mgmt-researcher intervention team
- Feedback to management, employees and unions
  - Review of survey results
  - Targeted 56 adverse work conditions & recommended solutions
- Examples of intervention targets
  - Consultation with nurses on staffing, training plan & schedule
  - Ergonomic improvements
  - Improve team communication, support
  - Task rotation between nurses & aides
  - Job enrichment, training for nurses' aides
  - Reduce delays in filling open staff positions (nurses, clerks)
  - Discuss with doctors that nurses' work is taken for granted

Bourbonnais R, et al. *Occupational and Environmental Medicine* 2006;63:326-334.

Quebec hospital workers:
Intervention vs. control hospital (after 3 yrs)

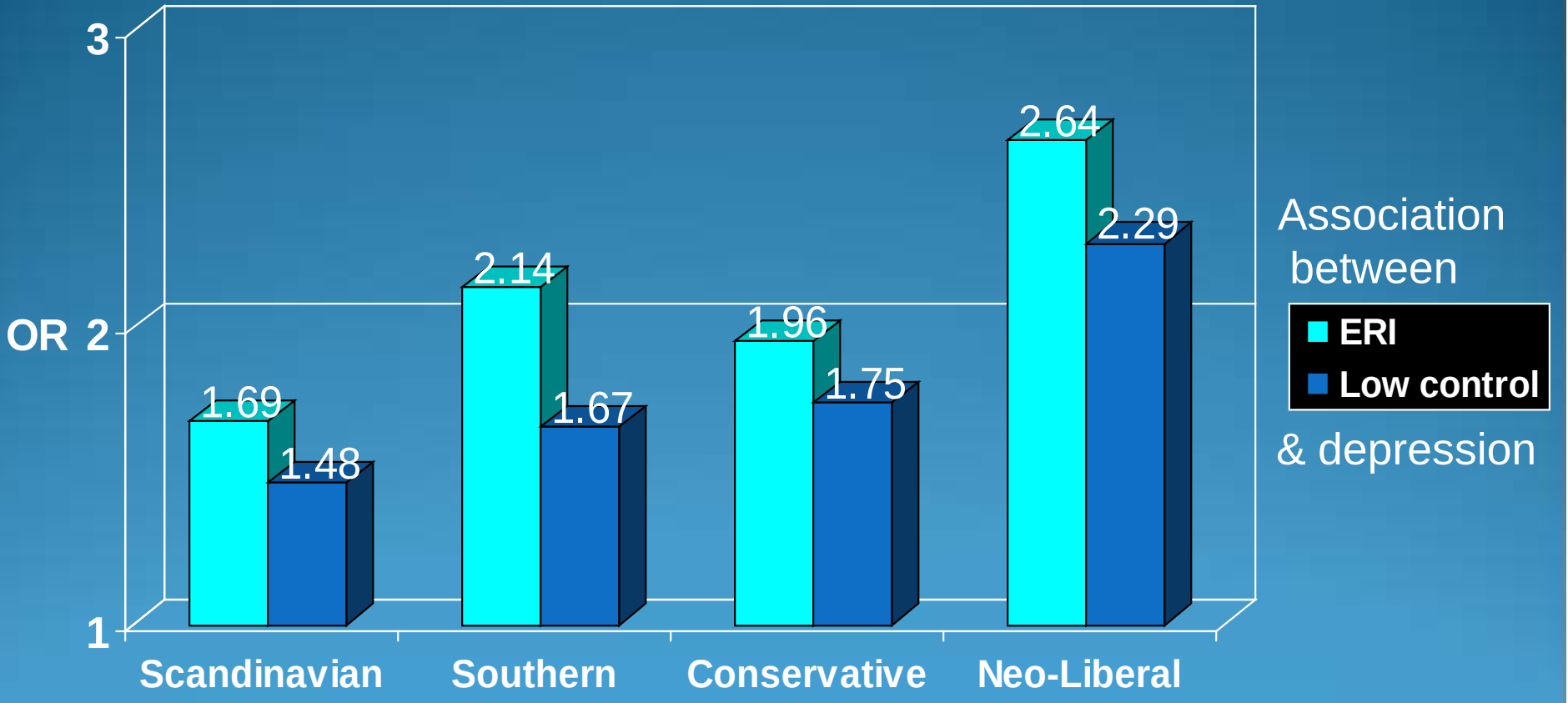
Greater reductions	Greater improvements	No difference
Job characteristics		
Psychological demands	Control	Co-worker support
Physical demands	Supervisor support	Emotional demands
Efforts greater than rewards	Reward	
	Work quality	
Health outcomes		
Anxiety, depression		Sleeping problems
Burnout		

Bourbonnais R, et al. *Occupational and Environmental Medicine* 2011;68:479-86.

National policies/laws make a difference:

Assoc. between job stressors & depression varies by type of national policies

(5383 men, 4534 women, age 50-64, 12 European countries, 2004)



Dragano N, Siegrist J, Wahrendorf M. J Epidemiol Comm Health 2011;65(9):793-9.

International examples

- The European PRIMA-EF website provides guidance on psychosocial risk management, see pages 9–11 at http://prima-ef.org/guide.aspx.

- WHO Healthy Workplaces http://www.who.int/occupational_health/healthy_workplaces/en/

  "A healthy workplace is "one in which workers and managers collaborate to use a continual improvement process to protect and promote the health, safety and wellbeing of all workers and the sustainability of the workplace."

Acknowledgments

- Dr. Paul Landsbergis, Downstate University, New York
- Dr. Tony LaMontagne, Melbourne School of Population Health, University of Melbourne AUSTRALIA
- Dr. Peter Schnall, Center for Occupational and Environmental Health, University of California, Irvine.

END

Table 1
Number of studies included in the review sorted by hypothesis (i.e., ERI, OVC, and interaction) and outcome category

Outcome category	Total ($n = 45$)	ERI hypothesis (effort × reward)			OVC hypothesis	Interaction hypothesis (effort × reward × OVC)
		All[a]	Extrinsic effort[b]	Remaining[c]		
Physical health outcomes	25*					
CVD incidence	8	8	5	3	5	1
CVD symptoms and risk factors	17	15	13	2	11	3
Other outcomes	1	1	1	0	1	1
Behavioral outcomes	3					
Behavioral outcomes	3	3	3	0	1	0
Psychological well-being	19*					
(Psycho)somatic health symptoms	16	15	13	3	7	3
Job-related well-being	7	6	6	0	2	4

*Note that some studies include several types of outcomes and therefore are counted twice, i.e., the sum of studies in the sub-categories exceeds the number of studies in the main outcome categories (and in a similar way this means that counting the total amount of studies exceeds 45).

[a]All studies that tested the ERI hypothesis (i.e., effort × reward).

[b]Only studies that explicitly tested the ERI hypothesis with *extrinsic* effort and rewards (i.e., extrinsic effort × reward).

[c]Remaining studies that tested ERI hypothesis at least with *intrinsic* (and possibly extrinsic) efforts and rewards (i.e., intrinsic/extrinsic effort × reward).