

Karasek-Theorell model: strain & learning predictions

STRAIN (health literature):

Selye: some stress is good for you (“eustress”), while too much stress is bad (“dystress”) (p. 91)

- How do you know when it is too much?
- What do stress management programs say?
- In Selye’s laboratory experiments, control always low
- Similar health effects, despite different stressors

STRAIN INHIBITS LEARNING

- Ex: Forced participation in stressful treadmill exercise after potential learning experience inhibits new learning retention
- Prolonged stress → burnout, fewer initiatives at work

Karasek-Theorell model: strain & learning predictions

ACTIVE LEARNING (social psychology literature):

“Stresses can be seen as challenges and opportunities for growth and learning”

“Learning occurs in situations that require both individual psychological energy expenditure (challenges/demands) and the exercise of decision-making capability”

Learn new (healthier?) behaviors to cope with stressors

Short relaxation breaks at self-determined optimal times

LEARNING PASSIVITY

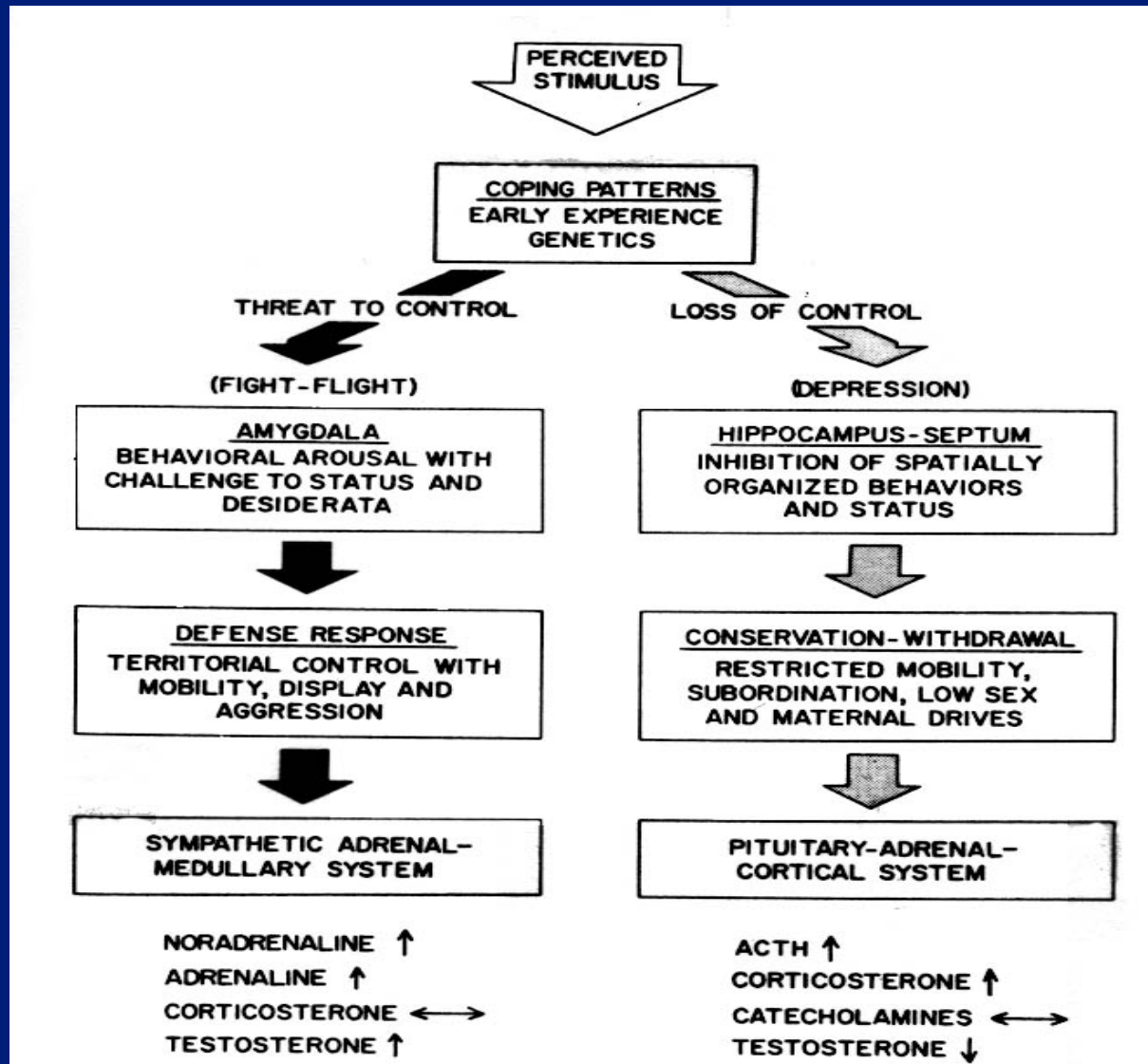
“Learned helplessness”

LEARNING INHIBITS STRAIN

Perceptions of control/mastery → less psychological distress

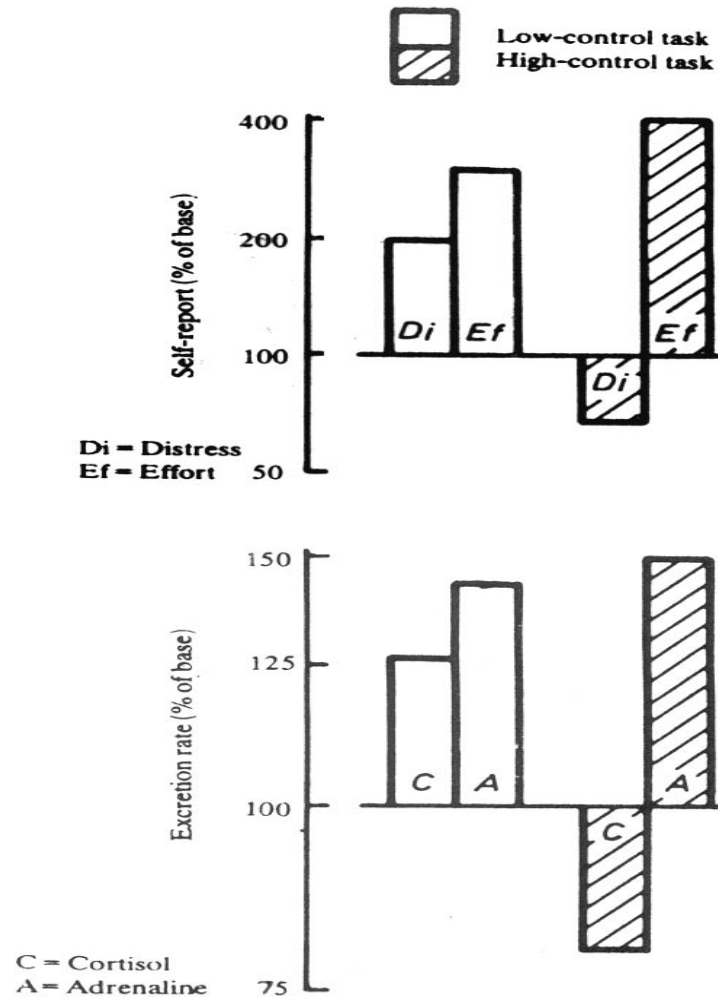
Parents in rigid jobs → transmit to children:

more rigid coping styles, obedience to authority



Two neuroendocrine systems involved in the stress response. Source: "Stress, health and the social environment" by JP Henry and PM Stephens, 1977, New York: Springer-Verlag, p. 119.

FIGURE 2
Mean values for self-reports of distress and effort (upper diagram)
and cortisol and adrenaline excretion (lower diagram)



Note: Values obtained during a low-control task and a high-control task are expressed as percentages of values obtained during a baseline condition (from Frankenhaeuser (1982))

Job strain and health behaviors

HIGH JOB STRAIN

- Fatigue and prolonged recovery → sedentary behavior, withdrawal from learning situations
- Need to regulate arousal & counteract feelings of distress → alcohol, smoking, overeating

PASSIVE JOBS

- Reduces self-efficacy, ability to tackle challenges/solve problems
- Feelings of depression, learned helplessness

ACTIVE JOBS

- Active learning, increased involvement in work, community
- Increased intellectual flexibility, non-authoritarianism

RESEARCH on JOB CHARACTERISTICS

- Some evidence for smoking
- Weak evidence for alcohol, BMI, exercise

3-Year Change in Smoking Prevalence and Job Decision Latitude

	<u>Time 1 (baseline)</u>	<u>Time 2 (3 years)</u>	<u>Change in Job Decision Latitude</u>
Smoking	Yes	Yes (n=27)	+1.5
		No (n=13)	+4.0
	No	Yes (n=7)	-1.6
		No (n=142)	-0.3

(controlling for age, race, education, marital status, and number of children at home)

F=4.37 (8,180)
p=.005

Integration of health promotion/health protection

WellWorks Project -- in 24 worksites in Massachusetts

–Blue-collar workers:

- More personal risk factors & more exposure to workplace hazards
- Lower participation in health promotion programs
- View health promotion as intrusive and as a “smoke screen”?

–Work sites randomly assigned to intervention & control conditions

–Joint worker-mgmt participation in program planning, implementation

–Consultation on changes in work environment

–Education on personal behavior change and health protection

–Barriers to participation, such as blue-collar workers’ time constraints & job responsibilities, addressed through negotiation of time-off for participation in health promotion activities

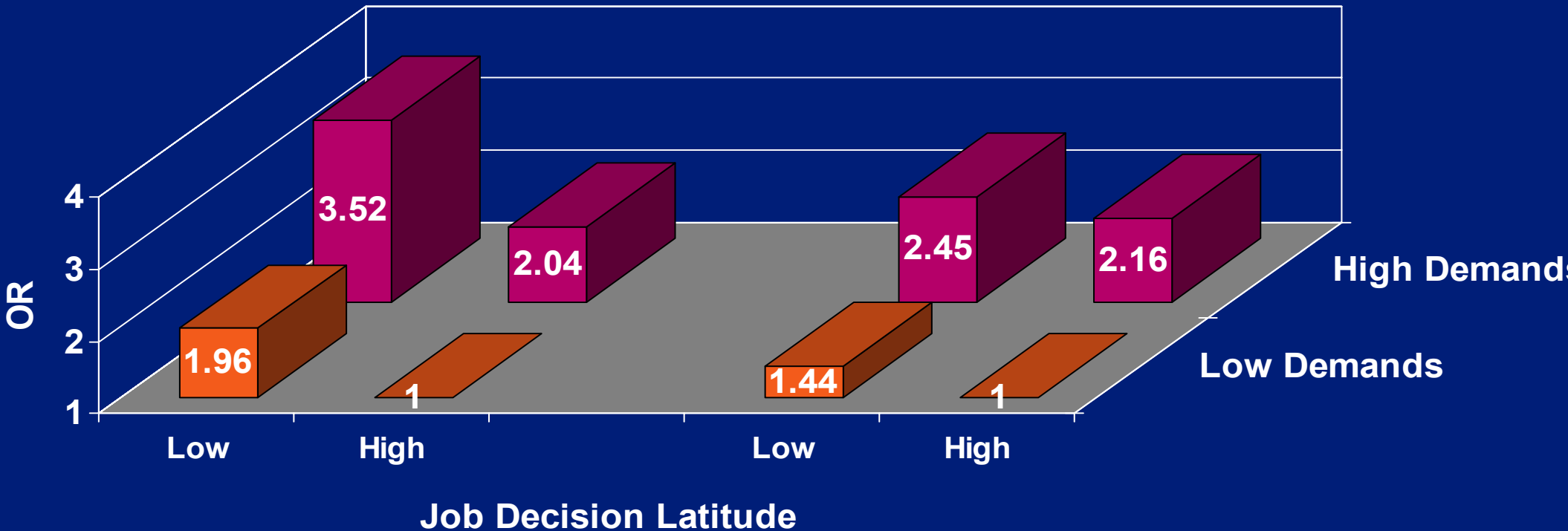
Sorensen G, Stoddard A, Ockene JK, Hunt MK, Youngstrom R. Worker participation in an integrated health promotion/health protection program: Results from the WellWorks Project. *Health Education Quarterly* 1996;23:191-203

Integration of health promotion/health protection

WellWorks Project -- in 24 worksites in Massachusetts

- Participation by blue-collar workers somewhat lower for nutrition (40% vs. 51%) and smoking (28% vs. 37%) programs; higher for occupational exposures (42% vs. 36%) (Table 1)
- Significant association between participation in nutrition & occupational exposure-related activities (Table 2; Table 4-5, adj)
- When workers aware of employer changes to reduce occupational hazard exposures, they were more likely to participate in smoking control, nutrition and occupational activities (Table 3; Table 4-5, adj)
- Suggests that participation in programs to reduce exposures to occupational hazards might contribute to blue-collar workers' participation in health promotion activities

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

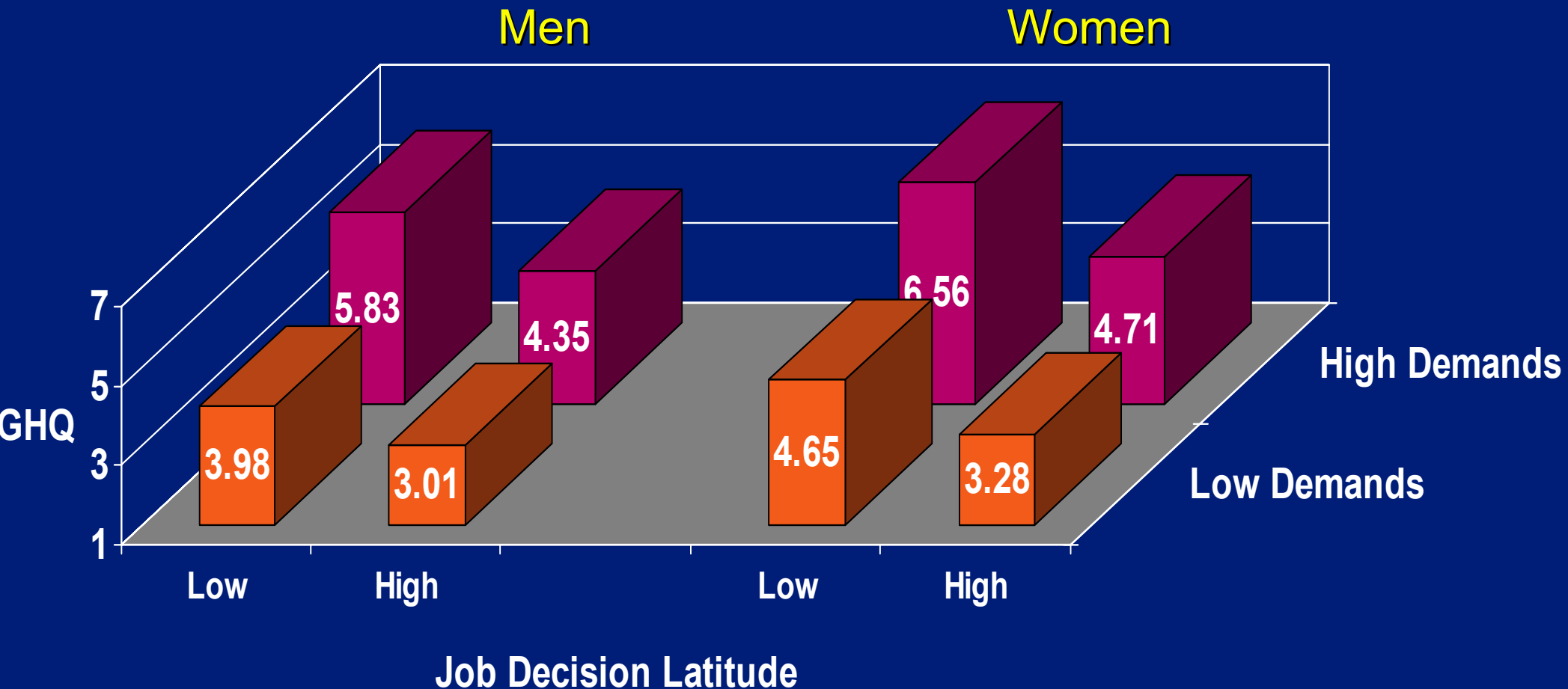


Crude Association

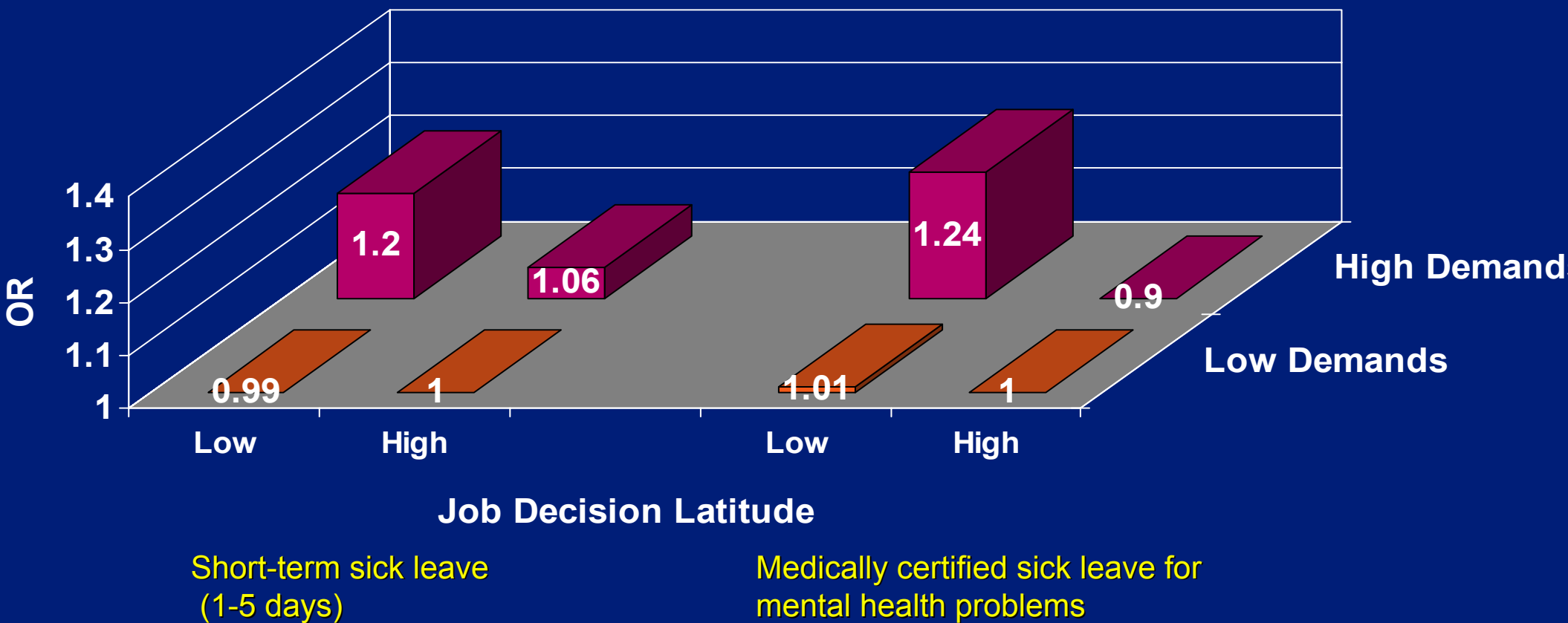
Adjusted for Age, Gender, Employment Status, Occupation, Social Support, Cynicism, Hostility, Domestic Load, Past Year Stressful Life Events

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

(Adjusted for age and employment grade)



Job strain and sickness absence: 20 month follow-up among 1,793 Quebec nurses



1999 review article: Van Der Doef & Maes

<u>Outcome</u>	<u>JDC Model</u>		<u>JDCS Model</u>		<u>Total N of Studies</u>
	<u>Strain</u>	<u>Buffer</u>	<u>Strain</u>	<u>Buffer</u>	
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)