

Health of Lay-offs Survivors

Association of Work Stress and Diet Quality

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Introduction

- Psychosocial characteristics of work lead to illness and injury

CVD

Metabolic Syndrome

Obesity (BMI-Central Obesity)

Smoking

Hypertension

Exhaustion-Depression-Anxiety

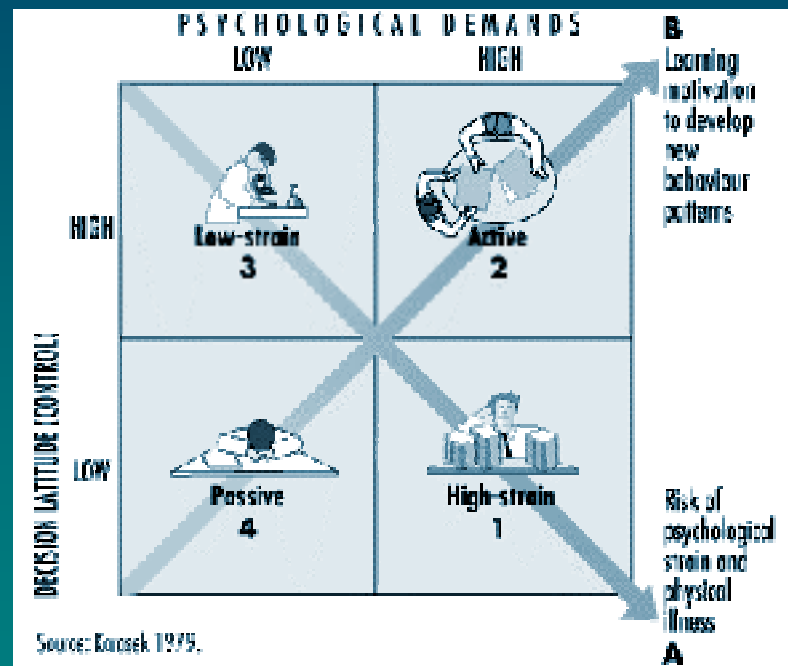
Diet quality

Introduction

How hard you work?

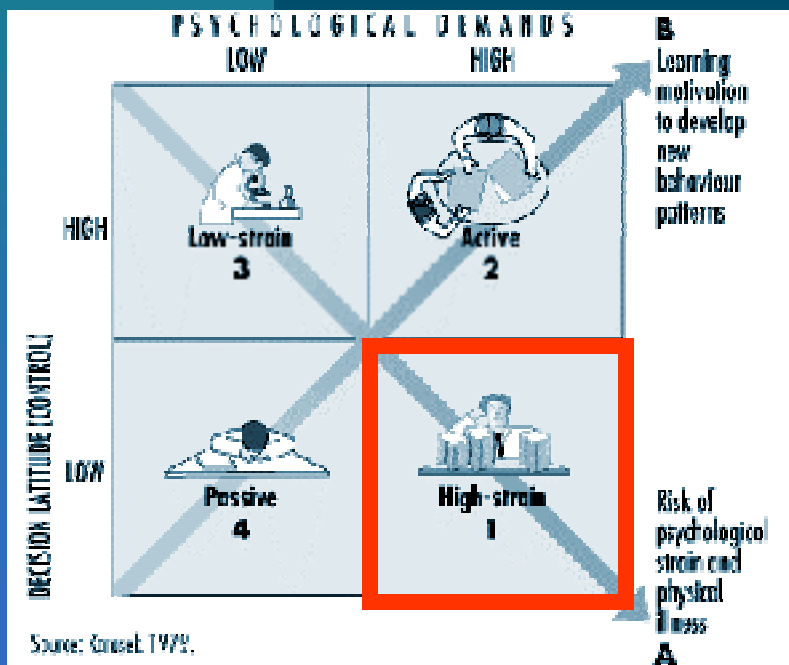
Who makes the decisions?

Who does what tasks?



DEMAND CONTROL MODEL

Introduction

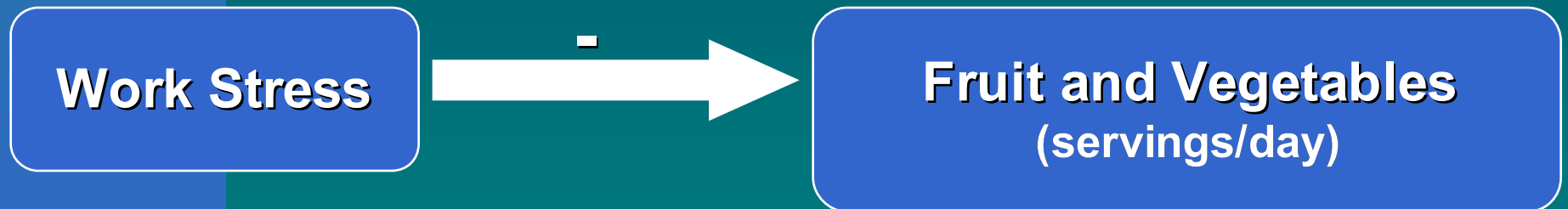


$$+ \text{SOCIAL ISOLATION} = \text{WORK STRESS}$$

ISO-STRAIN MODEL

Research Question

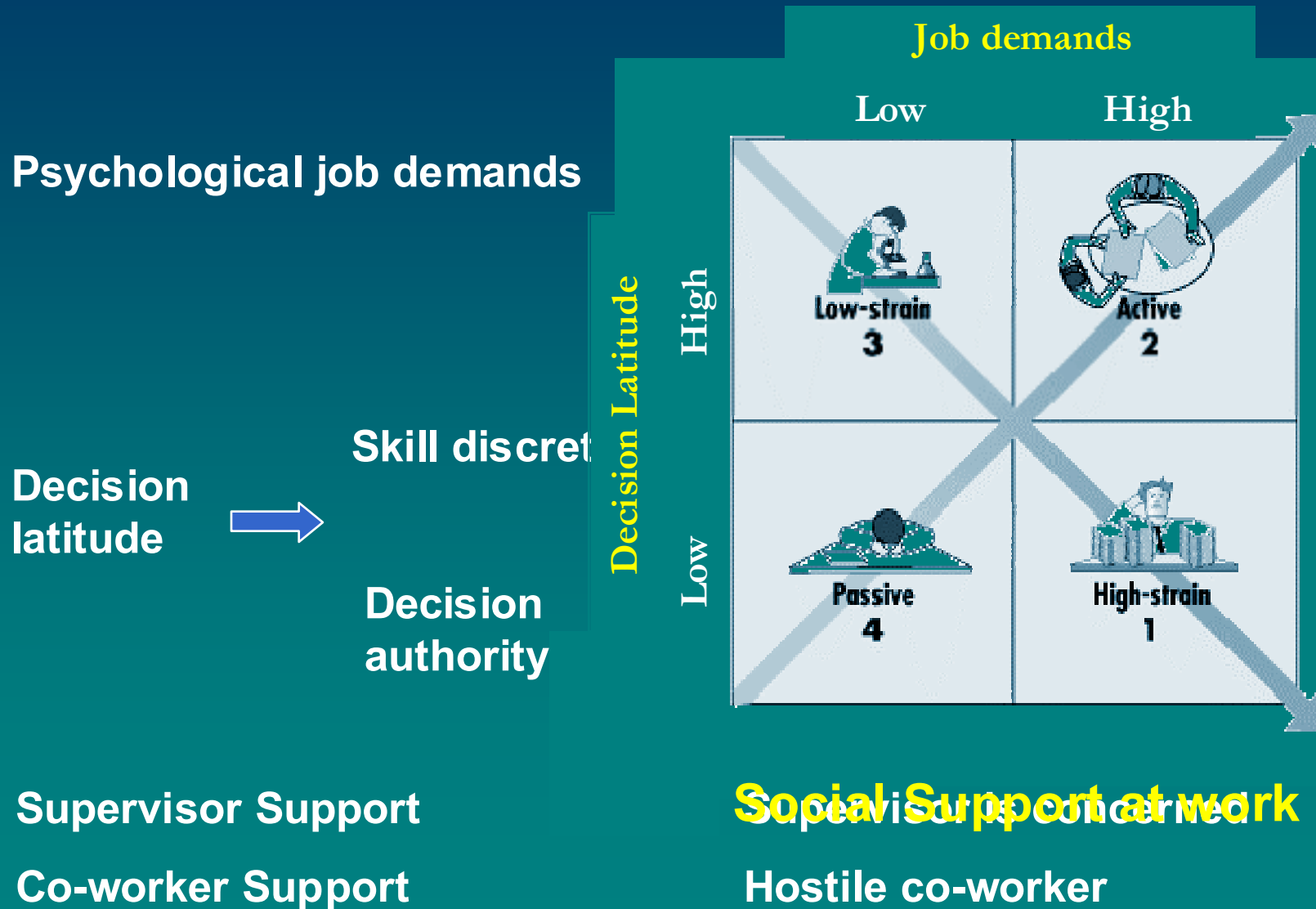
Psychosocial conditions at work have an effect on the workers' diet quality



Methods

- **Group-randomized trial for worksite weight gain prevention**
 - Analysis of baseline data
 - **Outcome:** # servings of fruits and vegetables/day
 - **Independent variable:** work stress
 - Covariates: age-gender-education-smoking status-BMI-race-marital status
 - Analysis: Mixed model with worksite as a random effect

Methods--Work Stress



Fruits and Vegetables FFQ

In the past month...

...about how often did you eat fruit NOT COUNTING
juices

...about how often did you eat green salad (with or
without other vegetables)

...

- | | |
|--|--|
| 1 <input type="checkbox"/> 1-3 times per MONTH | 5 <input type="checkbox"/> 1 time per DAY |
| 2 <input type="checkbox"/> 1-2 times per WEEK | 6 <input type="checkbox"/> 2 times per DAY |
| 3 <input type="checkbox"/> 3-4 times per WEEK | 7 <input type="checkbox"/> 3 times per DAY |
| 4 <input type="checkbox"/> 5-6 times per WEEK | 8 <input type="checkbox"/> 4 times per DAY |
| | 9 <input type="checkbox"/> 5 times or more per DAY |

Variable		Low Work Stress Mean(SE)	High Work Stress Mean(SE)
Sample Size = 2782			
Fruits & Vegetables		3.45 (0.08)	2.92 (0.18)¥
Age		47.54 (0.23)	47.52 (0.51)
BMI		28.74 (0.21)	29.87 (0.77)
Length of Employment		21.87 (0.70)	21.74 (0.81)
		Percent (SE)	Percent (SE)
Overweight		40.52% (1.40)	39.84% (3.60)
Obese		33.01% (1.66)	38.25% (3.99)
Education			
Secondary or less		19.85% (3.17)	33.47% (4.82)¥
Undergraduate		63.02% (2.36)	60.48% (4.30)
Graduate		17.14% (2.94)	6.05% (1.45)
Income > \$59,999		72.33% (2.08)	50.47% (4.00)¥
Race			
White		91.66% (0.85)	90.12% (2.36)
AfricanAmerican		4.87% (0.55)	6.17% (2.28)
Other		3.47% (0.74)	3.70% (1.53)
Smoking Status			
Current		10.35% (1.29)	12.15% (1.90)
Ex-smoker		27.00% (1.09)	27.94% (1.70)
Never smoked		62.65% (1.92)	59.92% (2.28)
Marital Status			
Married		77.91% (0.50)	66.13% (2.30)¥

RESULTS: Mixed Model Analysis

Work Stress and Servings of Fruits and Vegetables

Effect	Model 1		Model 2		Model 3	
	β coefficient	p-value	β coefficient	p-value	β coefficient	p-value
Intercept	3.45	< .001	0.79	0.095	1.02	0.043
Have Work Stress	-0.52	0.0040	-0.37	0.012	-0.32	0.020
Age			0.03	0.037	0.03	< .001
Gender (ref: male)						
Female			0.46	0.001	0.45	0.001
BMI			-0.01	0.067	-0.01	0.054
Education			0.25	< .001	0.26	< .001
Smoking Status (ref: non-smoker)						
Ex-smoker			-0.14	0.309	-0.09	0.408
Current smoker			-0.64	0.002	-0.72	< .001
Length of Employment			0.01	0.288		
Income			0.03	0.423		
Race (ref: white)						
Other			0.03	0.901		
African American			-0.33	0.103		
Marital Status (ref: Married)						
Separated			0.09	0.551		
Divorced			0.07	0.778		
Widowed			0.07	0.761		
			0.09	0.882		

Conclusions

- Psychosocial characteristics of the work environment are associated with diet quality

Work stress → Poor diet quality → CVD



Conclusions

- **Limitations**

- Proxy for diet quality
- Magnitude of the association - small
- Temporality
- Absence of individual level variables

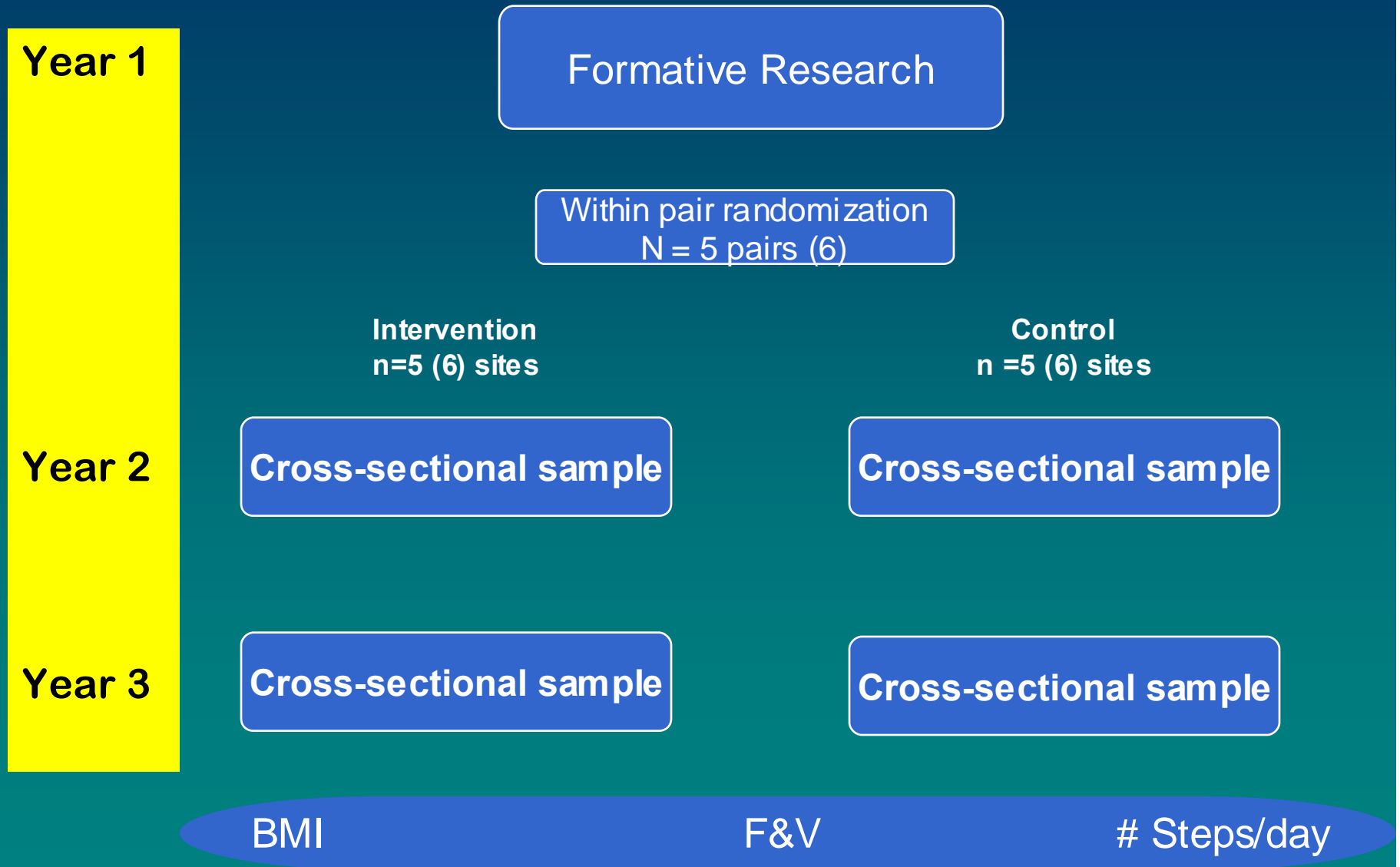
- **Previous evidence**

- Hellerstedt and Jeffrey (1997)
- Devine et al.(2007)

Thank you



Group-randomized trial on weight-gain prevention



DILBERT by Scott Adams

