

Workplace justice and health status of employees: A cross-sectional study from Taiwan

Yu-Ting Catherine Lu¹, Yawen Cheng^{1,2},
Chiou-Jong Chen³

¹ Department of Public Health, Institute of Health Policy and Management, College of Public Health, National Taiwan University, Taipei, Taiwan

² Institute of Health Policy and Management, College of Public Health, National Taiwan University, Taipei, Taiwan

³ Institute of Occupational Safety and Health, Council of Labor Affairs, Taipei, Taiwan

Roundtable presentation at APHA, SF, USA,
Oct, 29th, 2012



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Introduction 5-1

- Background

The psychosocial work characteristic, especially workplace justice, has been paid more attention on work for health recently.

<Elovainio, M., M. Kivimaki, and J. Vahtera, *Organizational justice: evidence of a new psychosocial predictor of health*. Am J Public Health, 2002. **92**(1): p. 105-8. >

Workplace justice is the concept of employees treatment with fairness in an organization system.

<Greenberg, J., *Cognitive Reevaluation of Outcomes in Response to Underpayment Inequity*. Academy of Management Journal, 1989. **32**(1): p. 174-184. >

Job control, work load and social support affect the health of employees but little is known about the association of workplace justice on employees' health status.

< Kivimaki, M., M. Elovainio, and J. Vahtera / DeSanto Iennaco, J., et al. / Cropanzano, R., et al >

Introduction 5-2

- Literature review 1-1

low organizational justice and unfair treatment are related to factors that influence susceptibility to illness, such as raised unfavourable serum lipids and negative feelings. <Kivimaki, M., et al., *Organisational justice and health of employees: prospective cohort study*. *Occup Environ Med*, 2003. **60**(1): p. 27-33; discussion 33-4.>

low justice was associated with worse cardiac and vascular regulation, as indicated by heart rate variability and systolic arterial pressure variability among women working in elderly homes. <Elovainio, M., et al., *Organisational injustice and impaired cardiovascular regulation among female employees*. *Occup Environ Med*, 2006. **63**(2): p. 141-4. >

Introduction 5-3

- Literature review 1-2

Among male civil servants with white collar jobs, those who experienced high justice at work had a 35% lower risk of incident coronary heart disease (CHD) than employees with low or intermediate justice.

<Kivimaki, M., et al., *Justice at work and reduced risk of coronary heart disease among employees - The Whitehall II Study*. Arch Intern Med, 2005. 165(19): p. 2245-2251. >

Public sector employees with multiple supervisors found smaller blood pressure elevations on days worked under a supervisor perceived as fair as compared with those on days worked under an unfair supervisor.

<Wager, N., G. Fieldman, and T. Hussey, *The effect on ambulatory blood pressure of working under favourably and unfavourably perceived supervisors*. Occup Environ Med, 2003. 60(7): p. 468-74. >

Introduction 5-4

- Literature review 1-3

Employees are treated with justice at the workplace affects their well-being. <Elovainio, M., M. Kivimaki, and J. Vahtera, *Organizational justice: evidence of a new psychosocial predictor of health.* Am J Public Health, 2002. 92(1): p. 105-8. >

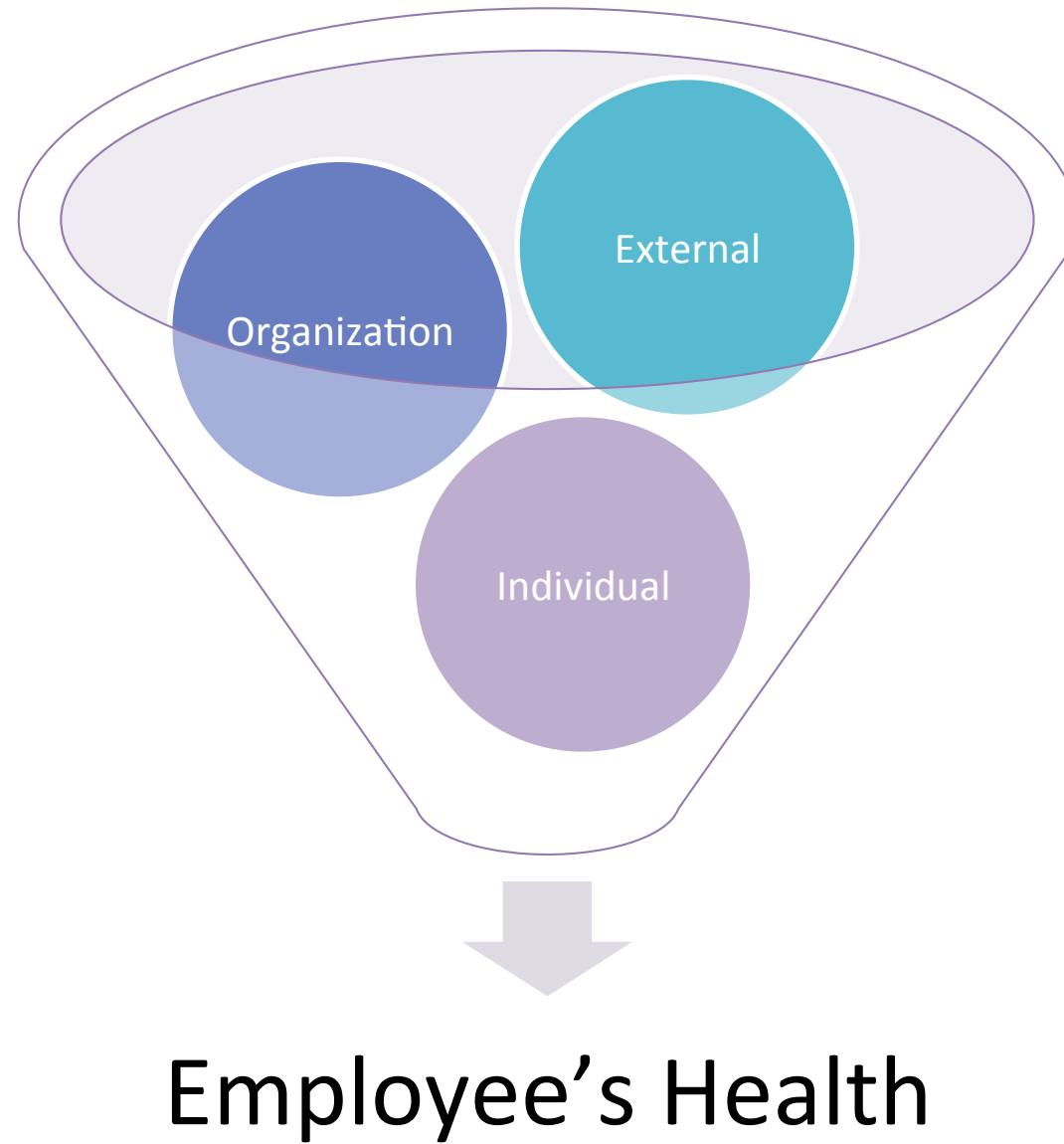
The level of workplace justice is associated with increased risk of psychiatric morbidity, sleeping problems, poor self-rated health status, cardiovascular disease, and even death from cardiovascular disease are related to the level of workplace justice. <Elovainio, M., et al. /Miller, D.T., >

Perceived job insecurity is an important source of stress, and it is accompanied with adverse psychosocial work conditions and poor health. <Cheng, Y., et al., *Job insecurity and its association with health among employees in the Taiwanese general population.* Soc Sci Med, 2005. 61(1): p. 41-52. >

Introduction 5-5

- Objectives
 - Evaluate the association between workplace justice and a variety of health outcomes.
 - Explore whether the workplace justice independently predicts health after adjusting the other confounders.

Introduction 5-6



Methods 5-1

- **Study Sample**
 - **The Council of Labour Affairs of Taiwan has conducted a nationwide survey of paid employees every 3–5 years since 1988. Subjects for this study were participants of the survey conducted in September 2010.**
 - **A total of 23932 subjects completed and returned questionnaires, with an overall response rate of 87. For this study, we excluded subjects who were aged younger than 25 or older than 65 years. This resulted in a sample of 9,563 men and 7,803 women (N=17,366).**

Methods 5-2

- **Measurements**
 - Based on existing questionnaires, seven items for workplace justice were selected.
 - The seven-item workplace justice scale consists of three items for distributive justice,
 1. one item for procedural justice
 2. two items for informational justice
 3. one item for interpersonal justice.
 4. three items for distributive justice
 - Each item was listed as a statement and the response was recorded on a four-point Likert scale, ranging from 1 (strongly disagree) to 4 (strongly agree).

Methods 5-3

<i>Workplace justice (7 items)</i>		
Original score (range 9-36) = Q1+Q2+(5-Q3)+Q4+Q5+Q6+Q7+Q8+Q9		
Standardized score (range 0-100) = $[(\text{original score}-7)/(36-7)] \times 100\%$		
Q1.	My supervisor and management trust employees (interpersonal justice)	Trust
Q2.	Information released by my supervisor and management is reliable (informational justice)	Information reliable
Q3.	In my company, employees' work duties and responsibilities are arranged fairly (distributive justice)	Work arranged fairly
Q4.	In my company, employees' monetary rewards, benefits and welfare are arranged fairly (distributive justice)	Rewards arranged fairly
Q5.	In my company, employees' performance is evaluated fairly (distributive justice)	Performance evaluated fairly
Q6.	During the process of making important decisions, my supervisor and management inform employees and provide sufficient information (procedural justice)	Information during decision making process
Q7.	My supervisor and management treat employees with respect (interpersonal justice)	Respect

Methods 5-4

- **Data Analysis**

Cronbach's α coefficient was calculated for workplace justice to assess internal consistency. For both men and women, Cronbach's α coefficients were 0.95 or greater for the workplace justice scale, indicating satisfactory internal consistencies.

SAS 9.1

1. Chi-square test

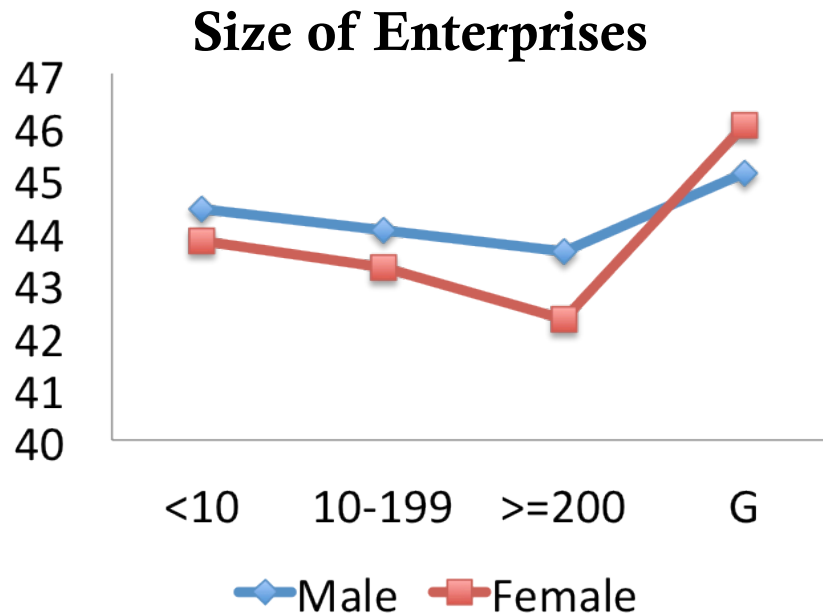
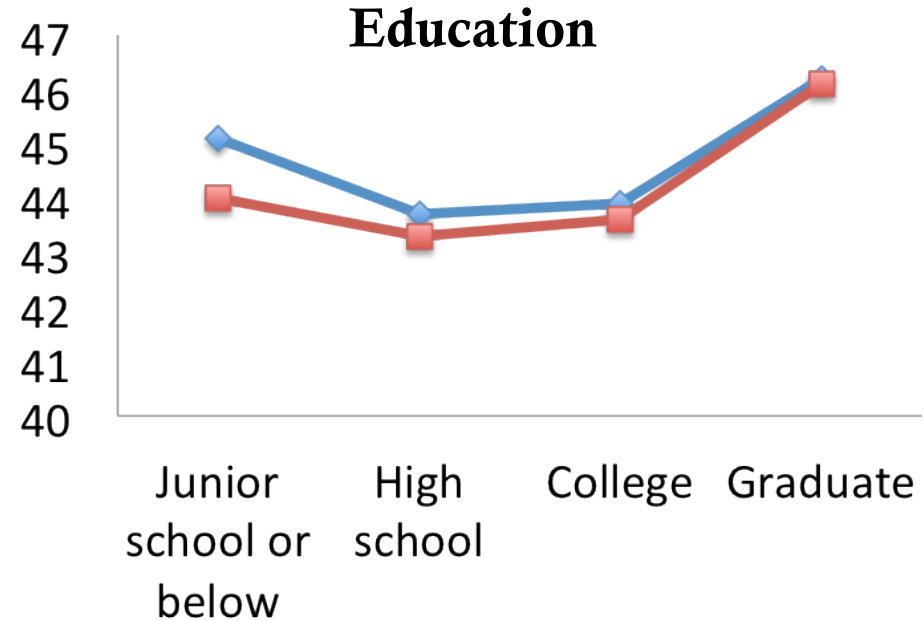
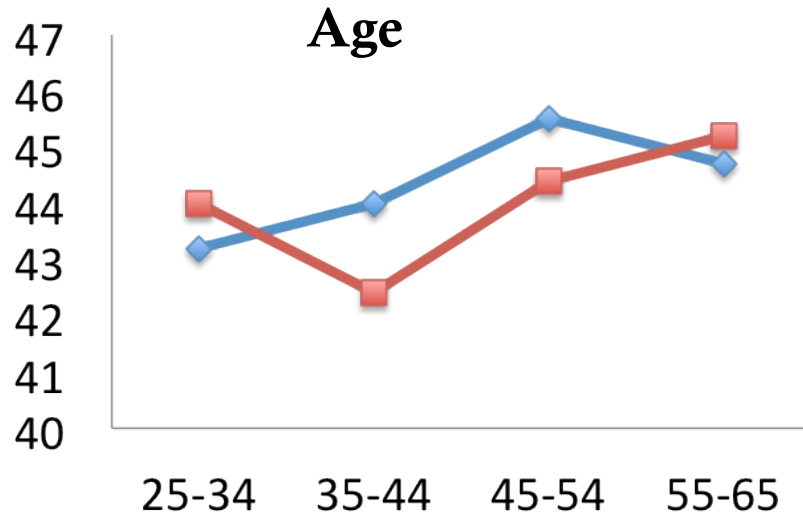
2. Multivariable regression models

Methods 5-5

- Data analysis
 - **Dependent variable:** self-rated health status, psychiatric morbidity, sleeping quality, disease
 - **Independent variable:**
 1. **Demographic characteristics:** age, education
 2. **Work condition:** work hour, firm size, hiring mode
 3. **Psychosocial work characteristics:** **workplace justice**, job control, job demand, job insecurity, physical job demand
 4. **Individual health behavior:** exercise, smoking, alcohol,

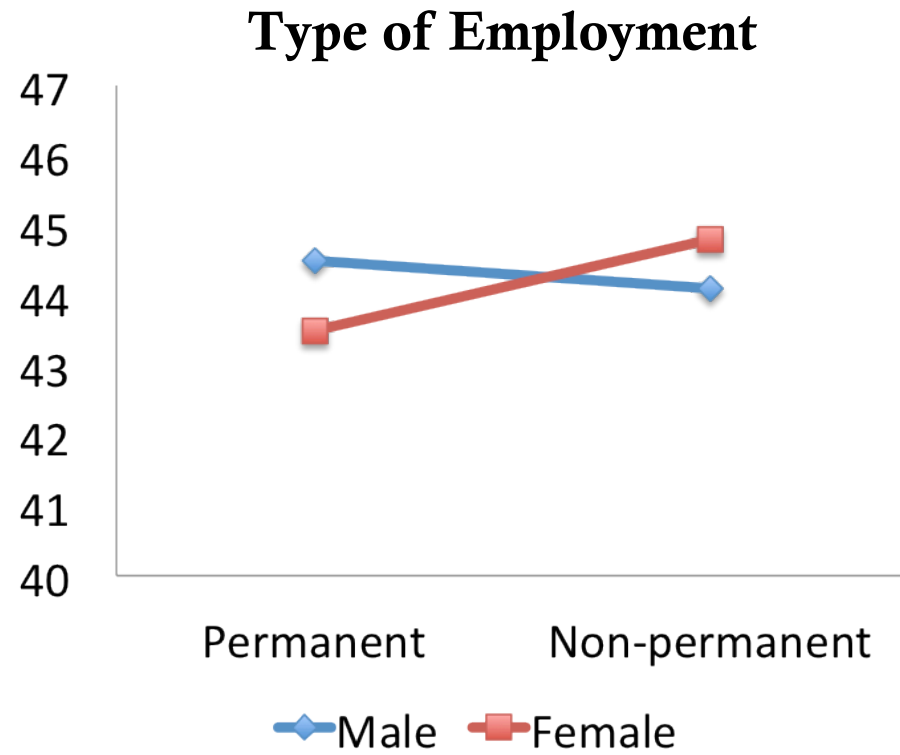
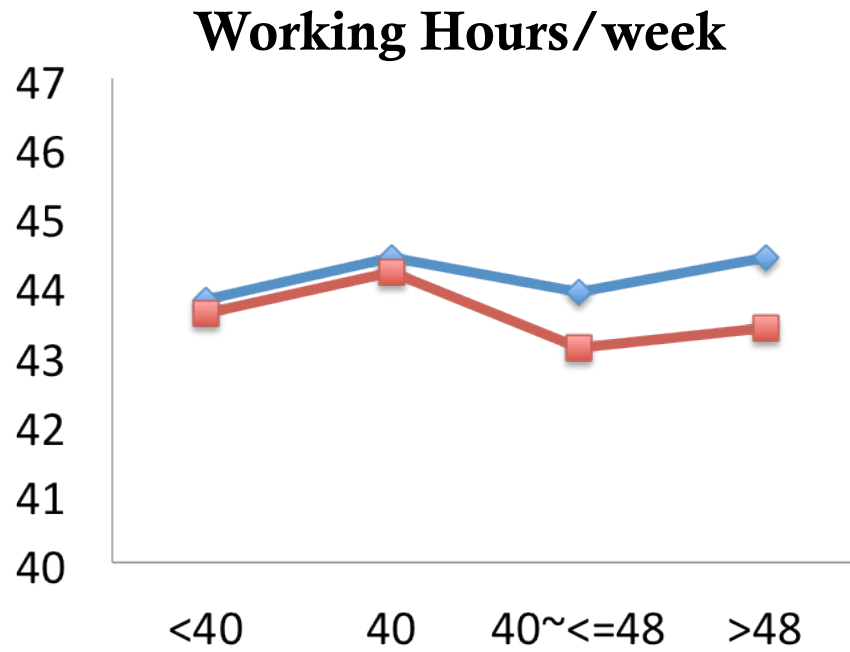
Results 6-1

Scores of Workplace Justice by Age, Education And Size of Enterprises



Results 6-2

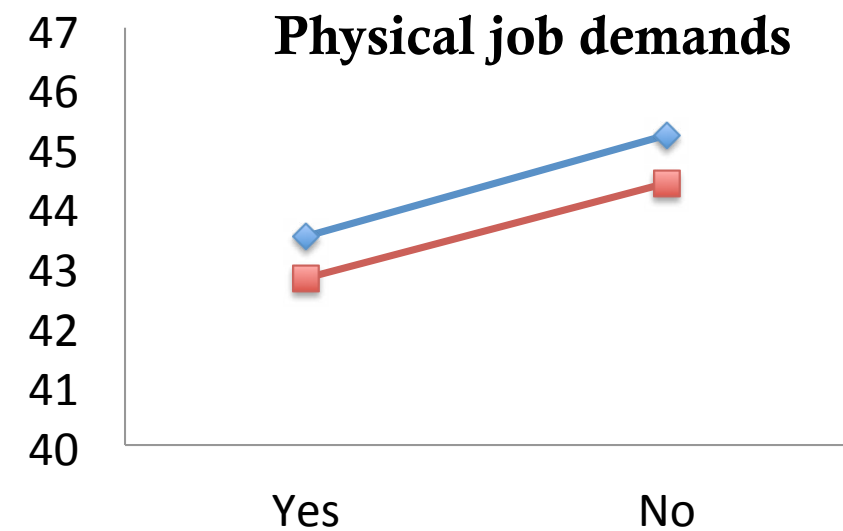
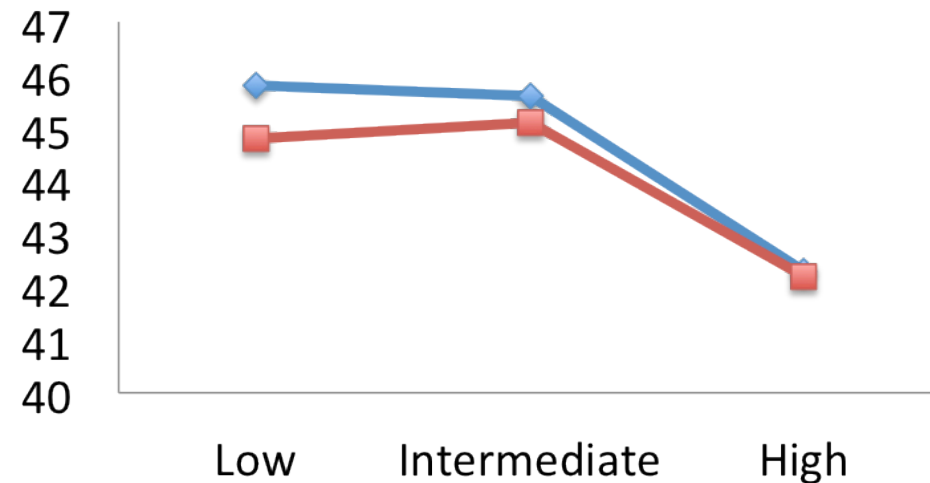
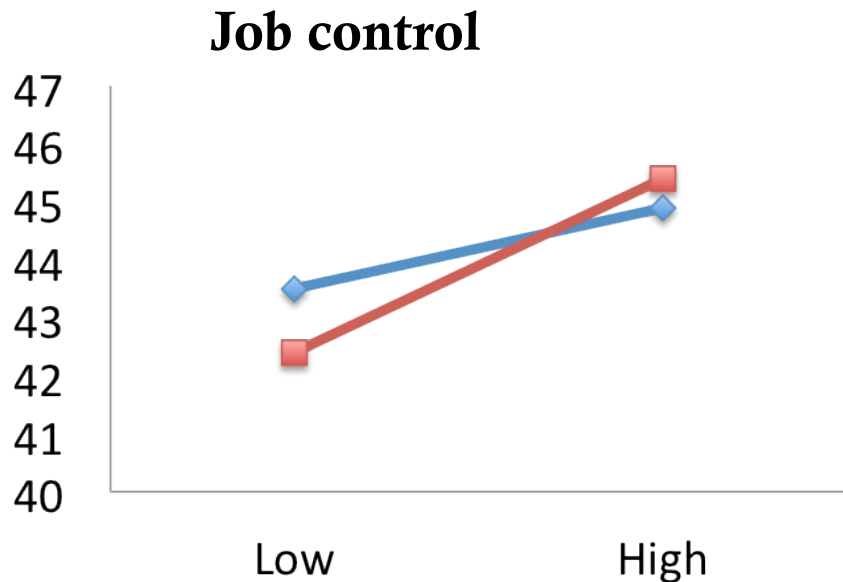
Scores of Workplace Justice by Working Hours/week and Type of Employment



—◆— Male —■— Female

Results 6-3

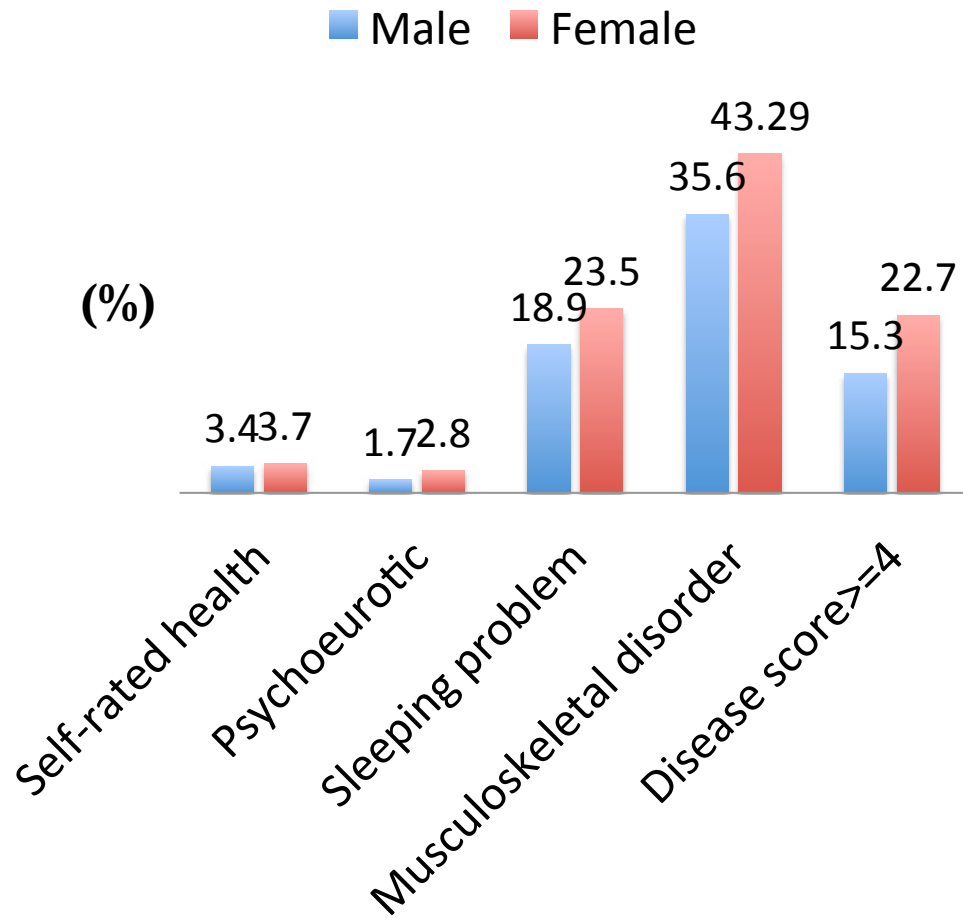
Scores of Workplace Justice by Psychosocial work characteristics



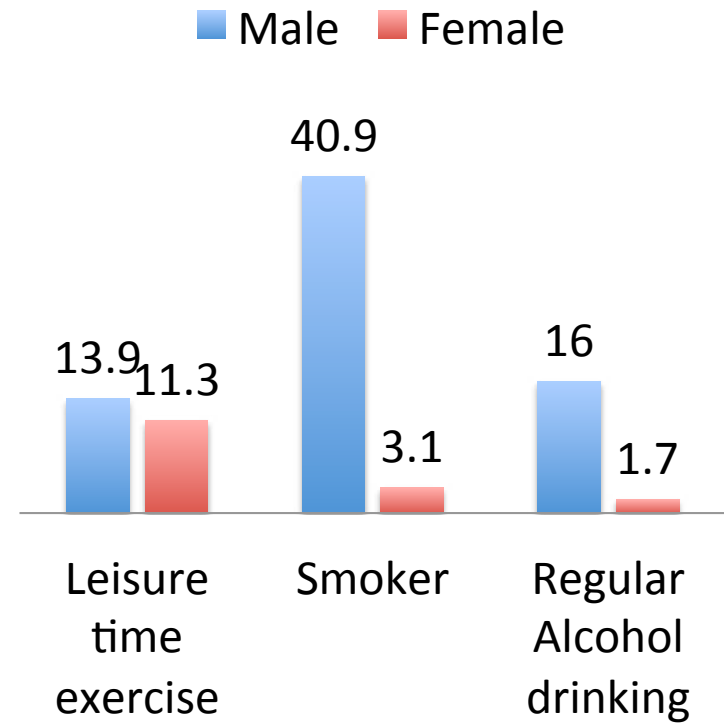
Results 6-4

Individual health status and health behaviors of study populations (%)

Poor Health Status



Health Behaviors (y/n)



Results ⁶⁻⁵

Association of workplace justice with Male employee's health outcome

	Poor SRH		Psychoneurotic disturbances		Sleeping problems		MSD		Disease score ≥ 4	
n=9,563	OR	(95%CI)	OR	(95%CI)	OR	(95%CI)	OR	(95%CI)	OR	(95%CI)
WJ										
High	1		1		1		1		1	
Medium	1.3	(0.8,2.1)	1.8	(0.8,3.7)	0.9	(0.7,1.0)	1.0	(0.9,1.2)	1.0	(0.8,1.2)
Low	3.0	(1.8,5.0) ***	3.6	(1.7,7.7) ***	1.6	(1.3,2.0) ***	2.0	(1.7,2.4) ***	2.5	(2.0,3.1) ***

***p<0.05 **p<0.01 ***p<0.001; Models controlling for Age, Type of Employment, Work Hours, Psychosocial Work characteristics and Health Behaviors.**

Results 6-6

Association of workplace justice with Female employee's health outcome

	Poor SRH		Psychoneurotic disturbances		Sleeping problems		MSD		Disease score \geq 4	
n=7,803	OR	(95%CI)	OR	(95%CI)	OR	(95%CI)	OR	(95%CI)	OR	(95%CI)
WJ										
High	1		1		1		1		1	
Medium	1.1	(0.7,1.7)	1.0	(0.6,1.6)	1.4	(1.1,1.7) **	1.1	(1.0,1.3)	1.5	(1.2,1.8) **
Low	1.9	(1.1,3.1) *	1.4	(0.9,2.4)	2.4	(2.0,3.0) ***	2.3	(1.9,2.7) ***	3.1	(2.5,3.9) ***

*p<0.05 **p<0.01 ***p<0.001; Models controlling for Age, Type of Employment, Work Hours, Psychosocial Work characteristics and Health Behaviors.

Discussion 3-1

- The outcome of multivariate regression shows the strong relationship between workplace justice and the health status of employees.
- The internal consistency of the questionnaire is more satisfied compared with the one from 2007.

Discussion 3-2

- Limitation

- Data were collected using cross-sectional surveys
- Subjective measure, can be influenced by individual's attitude

Discussion 3-3

- higher levels of organizational justice, acting as a mediator behind more positive attitudes and better well-being employees stimulating higher levels of job satisfaction and organizational commitment and lower levels of psychological distress and sleeping problems.



Yu Ting, Catherine Lu
Email: chobitslisa@gmail.com

THANK YOU