

여성 노동자의 건강

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하버드 보건대학원
산업보건 프로그램

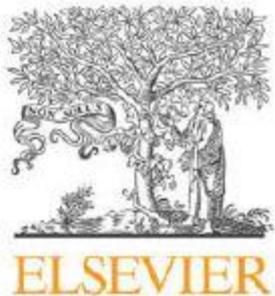
하버드 보건대학원
산업보건 프로그램



유전역학 (Genetic epidemiology and
gene-environmental interaction)



노동자들이 건강하게 일하는 데
어떻게 기여할 수 있을까?



Contents lists available at ScienceDirect

Social Science & Medicine

journal homepage: www.elsevier.com/locate/socscimed

Is precarious employment damaging to self-rated health?
Results of propensity score matching methods, using
longitudinal data in South Korea

Myoung-Hee Kim^a, Chang-yup Kim^{b,*}, Jin-Kyung Park^c, Ichiro Kawachi^d

하버드 보건대학원
환경보건학과



Ichiro Kawachi 교수님
하버드 보건대학원



Q: 비정규직 노동자 연구를 하고
싶은데 하버드에서 저를 도와주실
교수님이 있을까요?

하버드 보건대학원
환경보건학과



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Carles Muntaner 교수님
토론토 대학

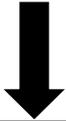


“교수님, 비정규직 노동자들의
건강문제를 연구하고 싶습니다.”



Dataset from Spain and Chile

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환경보건학과



Ichiro Kawachi 교수님
하버드 보건대학원



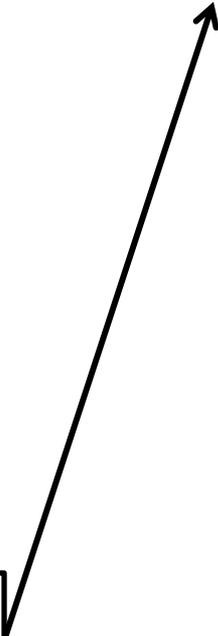
Carles Muntaner 교수님
토론토 대학



David Kriebel 교수님
메사추세츠 주립대학

첫번째 질문

“이미 사람들은 비정규직 일자리가
노동자 건강을 해친다는 것을 알고 있다.
굳이 그것을 증명하는 데 연구가
필요하다고 생각하는 이유가 무엇이니?”



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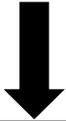
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두번째 질문

“(장차 노동조합과 NGO들과 활동을 하고
자 한다면) 하버드라는 Fancy한 대학에서
박사를 했다는 사실이 네게 주는 권위
자체가 중요할 수 있다. 그런데도
불구하고, 네가 박사과정 주제로 굳이
비정규직 주제로 연구하고자 하는 이유는
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두번째 질문

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무엇이니?”

세번째 질문

“그렇다면, 박사과정은 기존의 지식을
공부하거나 현실에 적용하는 적용하는
시간이 아니다. 새로운 지식을 창출하는
과정인데, 네가 비정규직 노동자 연구에서
새롭게 만들어 내고자 하는 연구의 내용은
무엇이니?”

하버드 보건대학원
환경보건학과



Ichiro Kawachi 교수님
하버드 보건대학원



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David Kriebel 교수님
메사추세츠 주립대학



?

Association between change of employment status and new-onset depression in South Korea: a gender analysis

Seung-Sup Kim, S V Subramanian,
Glorian Sorensen, Melissa J Perry,
David Christiani
Harvard School of Public Health

Background

-Increase of non-permanent employment

Economic recession

→ Increase of non-permanent employment (part-time, temporary job)

Recession

Recession forces a million to work part-time

Almost a million people are being forced to work part-time because they lost their full-time job, according to a new survey by the Bureau of Labor Statistics. The recession has forced about 1 million people to work part-time, up from 7 million in 2007.

WEDNESDAY, JANUARY 13, 2010

Temporary Employment Set to Increase Dramatically as We Come Out of the Recession, Says Jobs Expert Art Koff, of RetiredBrains.com

The country's economic recovery could be particularly challenging for Boomers and seniors looking for jobs after retirement. Art Koff, a jobs expert at RetiredBrains.com, suggests that contingent labor could increase its percentage of the workforce from the current 13 percent of employees to 39 percent in 2010.

Temporary employment in 2010
:13 % to 39%

Recession Pushes More Into Part-Time Work, Discouragement

Unemployed Americans are so discouraged about the prospect of finding a new job that they're checking out of the labor force at the highest and fastest rate in nearly 10 years. Further, the recession has

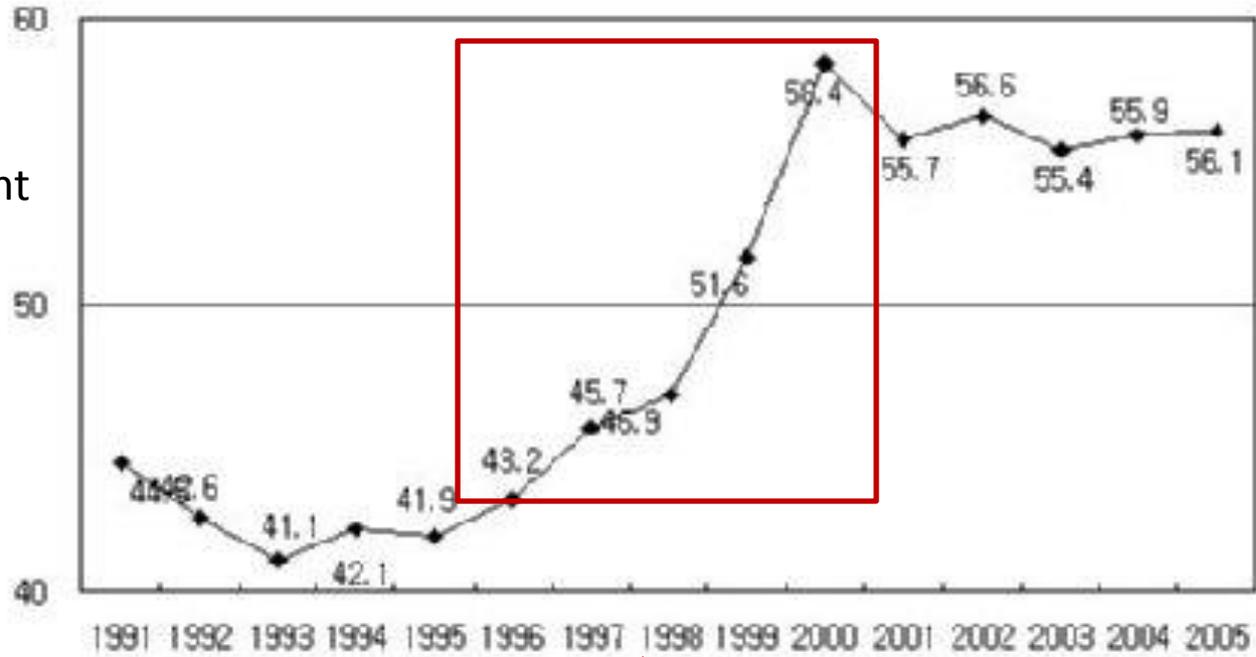


Background

- Increase of non-permanent employment in South Korea

<

Proportion of non-permanent employment %



50.6 %
in 2010

↑
Year
자료: 통계청

Economic crisis (1997)

Previous research in South Korea

AMERICAN JOURNAL OF INDUSTRIAL MEDICINE 51:748-757 (2008)

Gender, Precarious Work, and Chronic Diseases in South Korea

Il-Ho Kim, PhD,¹ Young-Ho Khang, MD, PhD,² Carles Muntaner, MD, PhD,³ Heeran Chun, PhD,¹

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Social Science & Medicine 63 (2006) 566-574

MEDICINE

www.elsevier.com/locate/socscimed

The relationship between nonstandard working
and mental health in a representative sample of the
South Korean population

Il-Ho Kim^a, Carles Muntaner^b, Young-Ho Khang^c, Domyung Paek^a, Sung-Il Cho^{a,*}

ScienceDirect

Medicine

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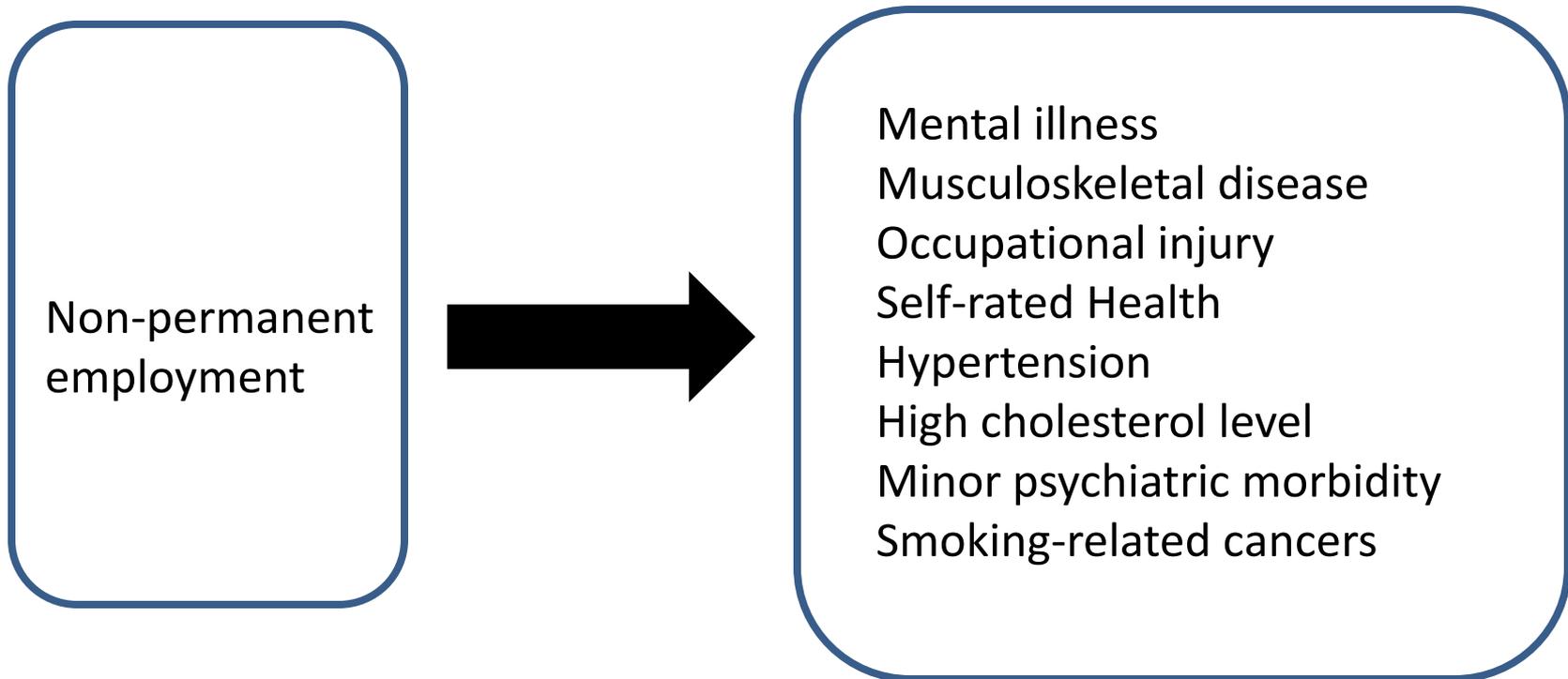


Is precarious employment damaging to self-rated health?
Results of propensity score matching methods, using
longitudinal data in South Korea

Myoung-Hee Kim^a, Chang-yup Kim^{b,*}, Jin-Kyung Park^c, Ichiro Kawachi^d

Background

- Health effects of non-permanent employment



Ferrie et al., 1995, Quinlan et al. 2001, P Viratanen et al., 2002, Ferrie et al. 2001;
Ferrie et al. 2002, Kivimaki et al. 2003, IH Kim et al, 2008, MH Kim et al., 2008,
Anthony LaMontagne et al, 2009

Background

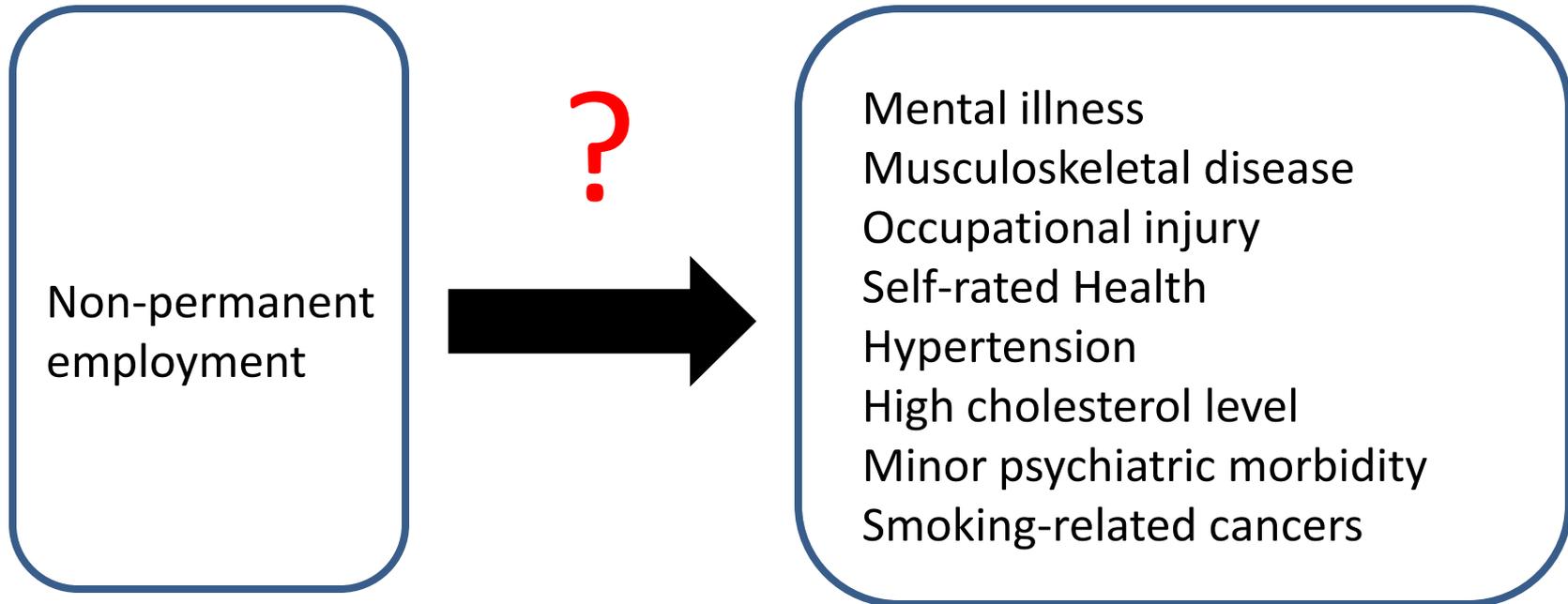
- Health effects of non-permanent employment

Protective effect or no effect?

Liukkonen, V., et al., 2004.
Virtanen, M. et al., 2003
Bardasi E. et al, 2006

Reverse causation?

Benach et al 2004; Benavides et al 2000; I.H. Kim et al 2005; P. Virtanen et al. 2003; P. Virtanen et al 2002



Ferrie et al., 1995, Quinlan et al. 2001, P. Virtanen et al., 2002, Ferrie et al. 2001; Ferrie et al. 2002, Kivimaki et al. 2003, I.H. Kim et al, 2008, M.H. Kim et al., 2008, Anthony LaMontagne et al, 2009

Background

- Effect modification by gender

ELSEVIER

Social Science & Medicine 64 (2007) 776–781

MEDICINE

www.elsevier.com/locate/socscimed

Is precarious employment more damaging to women's health than men's?

María Menéndez^a, Joan Benach^{b,*}, Carles Muntaner^c, Marcelo Amable^b,
Patricia O'Campo^d

“Many (female) employees working under temporary work status, job insecurity, low social protection and low income level”

“The health of women is disproportionately affected by workplace flexibility, this has been largely ignored.”

Objectives

- Examine the association between change of employment status and new-onset depression
- Examine whether these associations are modified by gender or not

Data sources

- The Korean Welfare Panel Study
 - An annual longitudinal study of a nationwide representative sample of 18,856 participants from 7,072 households at baseline
 - To date, data from the 1st through 3rd wave (2005-2007) have been publicly released
 - Follow-up rate is 89% at the 3th wave

Exposure variable

- Change of employment status

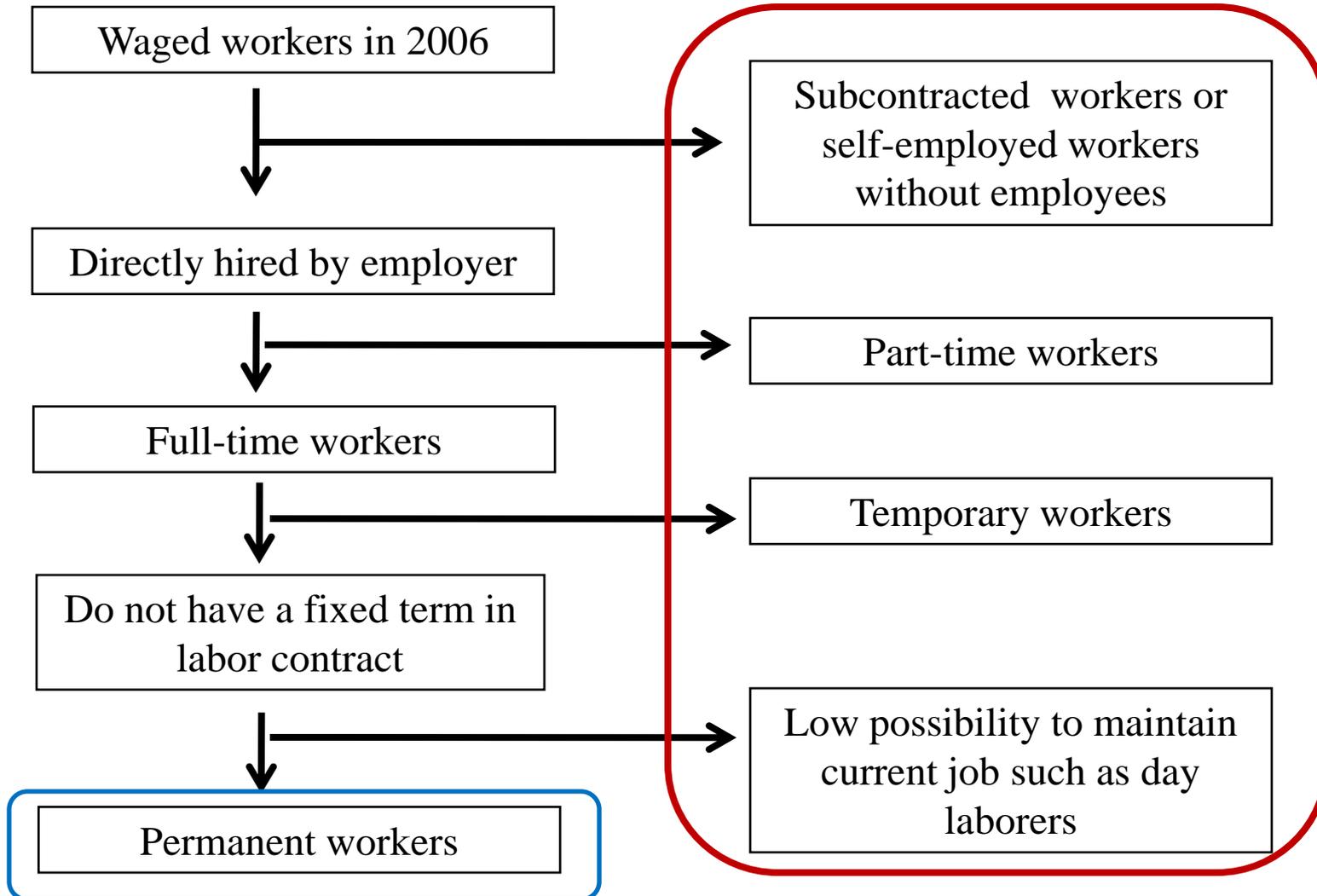
Change of employment status

	Baseline (2006)	Follow-up (2007)
Reference group		Permanent
	Permanent	Non-permanent
		Unemployed
		Non-permanent
	Non-permanent	Permanent
		Unemployed

Exposure variable:

Permanent Vs Non-permanent worker

Non-permanent workers



Exposure variable:

정규직 Vs 비정규직

고용관계(h0403_aq1)	근로시간형태(h0403_6)	근로계약유무(h0403_3aq1)	근로지속가능성(h0403_3aq2)	구분
직접고용(=1)	전일제(=2)	무기계약(=2)	지속가능(=1)	정규직
		무기계약(=2)	지속불가능(=2)	
		유기계약(=1)	지속가능(=1)	비정규직
		유기계약(=1)	지속불가능(=2)	
	시간제(=1)	-		
간접고용(=2)	-	-		
특수고용(=3)	-	-		

Outcome variable

- Depression
 - Measured by 11 item CES-D (Center for Epidemiologic Studies Depression Scale)
 - CES-D : a short self-report scale designed to measure depressive symptom in the general population.
 - Used as a dichotomous variable
 - A cut off score in the standard CES-D Scale is 16 points for depressive symptoms. In this 11 itemed version, a score of 9 or greater will be used (determined by extrapolation; $16/20 \times 11=8.8$, rounded up to 9)

Study design

Workers without depression at baseline (2006)



Change of employment status	
Baseline (2006)	Follow-up (2007)
Permanent	Permanent
	Non-permanent
	Unemployed
Non-permanent	Non-permanent
	Permanent
	Unemployed

Multiple logistic regression



New-onset depression (2007)

Potential confounders: age, gender, marital status, educational level, residential area, smoking status, having any chronic disease and any disability at baseline(2006)

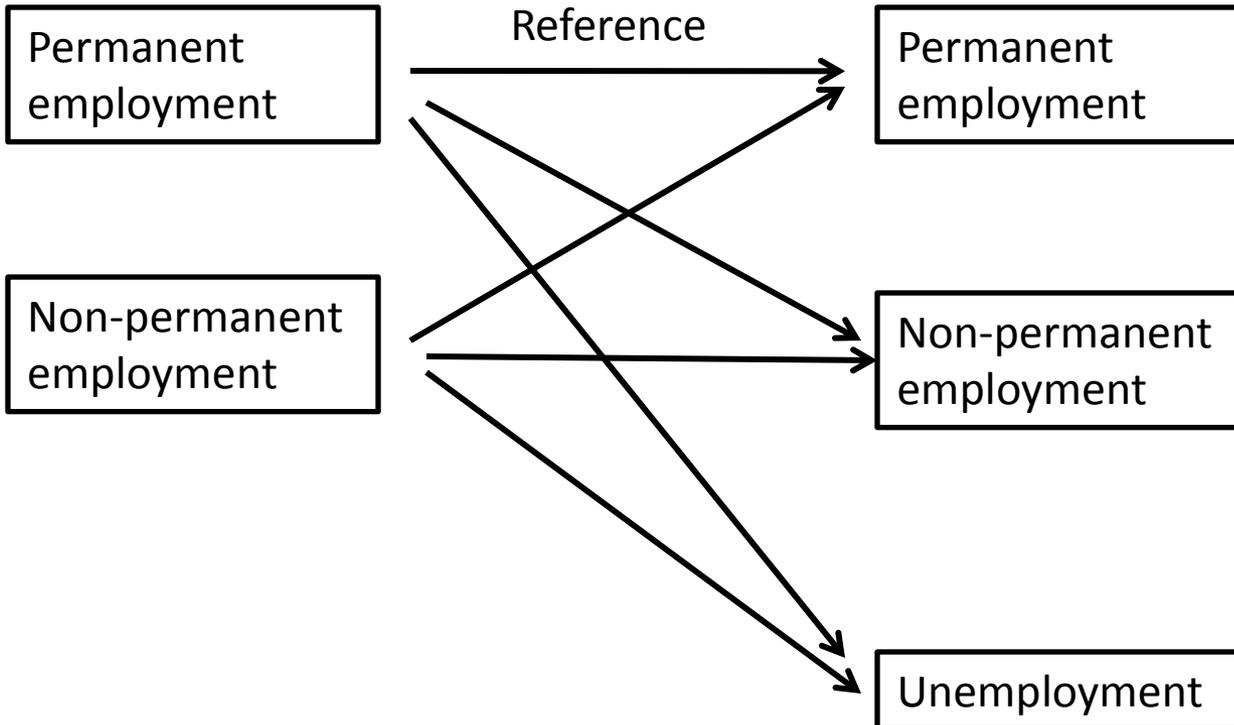
Hypotheses I.

- Change of employment status and depression

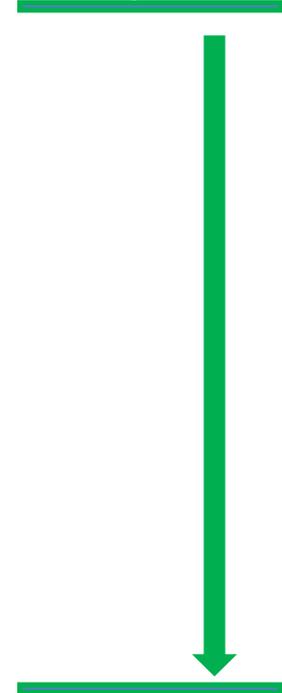
Expected associations based on hypotheses

Baseline (2006)

Follow-up (2007)



High income,
secure job



Low come,
insecure job

Hypotheses I.

- Change of employment status and depression

Expected associations based on hypotheses

Baseline (2006)

Follow-up (2007)

Permanent employment

Permanent employment

Non-permanent employment

Non-permanent employment

Unemployment

Reference



High income,
secure job



Low come,
insecure job

The hypotheses expected three red arrows to be significant.

Hypotheses II.

- Effect modification by gender

Baseline (2006)

Permanent employment

Non-permanent employment

Reference

Follow-up (2007)

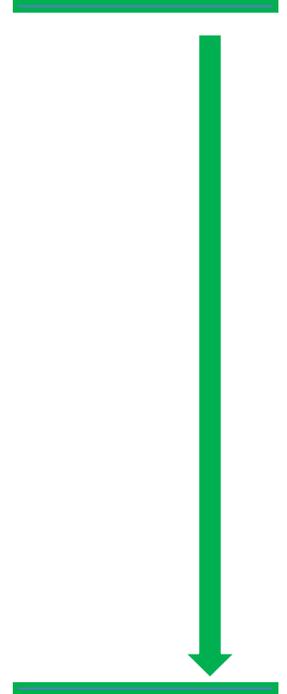
Permanent employment

Non-permanent employment

Unemployment



High income,
secure job



Low come,
insecure job

The associations could differ by gender

Result 1.

- Change of employment status and new-onset depression in full-population

Change of employment status		Full-population (n=2,890)			
		Unadjusted		Fully adjusted ^b	
2006	2007	OR	95% CI	OR	95% CI
Permanent	Permanent	1	Referent	1	Referent
	Non-permanent	1.63*	(1.07, 2.49)	1.35	(0.87, 2.07)
	Unemployed	1.59	(0.55, 4.58)	1.31	(0.45, 3.80)
Non-permanent	Non-permanent	2.05***	(1.51, 2.77)	1.40*	(1.00, 1.96)
	Permanent	1.21	(0.83, 1.75)	1.07	(0.74, 1.57)
	Unemployed	3.57**	(1.66, 7.69)	2.69*	(1.22, 5.85)

a : Adjusted for age, gender, marital status, educational level, residential area, smoking status, having any chronic disease and any disability at baseline(2006)

Full-population and Sub-population

- To get more robust association, we also examined the association in the sub-population after excluding the unhealthy participants.
- Full-population
 - Workers without depression at baseline(2006)
- Sub-population
 - workers without depression in any of two prior years(2005 and 2006) and without any disability or any chronic disease in 2006 (n=2,020)

Result 2.

- Change of employment status and new-onset depression in subpopulation

Change of employment status		Sub-population ^a (n=2,020)			
		Unadjusted		Fully adjusted ^c	
2006	2007	OR	95% CI	OR	95% CI
Permanent	Permanent	1	Referent	1	Referent
	Non-permanent	2.09*	(1.23, 3.53)	1.77*	(1.03, 3.02)
	Unemployed	0.71	(0.09, 5.40)	0.59	(0.77, 4.47)
Non-permanent	Non-permanent	2.12***	(1.39, 3.23)	1.63*	(1.04, 2.55)
	Permanent	1.42	(0.89, 2.27)	1.3	(0.81, 2.09)
	Unemployed	4.05*	(1.31, 12.43)	3.08	(0.98, 9.71)

Full model : Adjusted for age, sex, marital status, educational level, residential area at baseline

Result 1 and 2

- Change of employment status and depression

Expected associations

Baseline (2006)

Permanent
employment

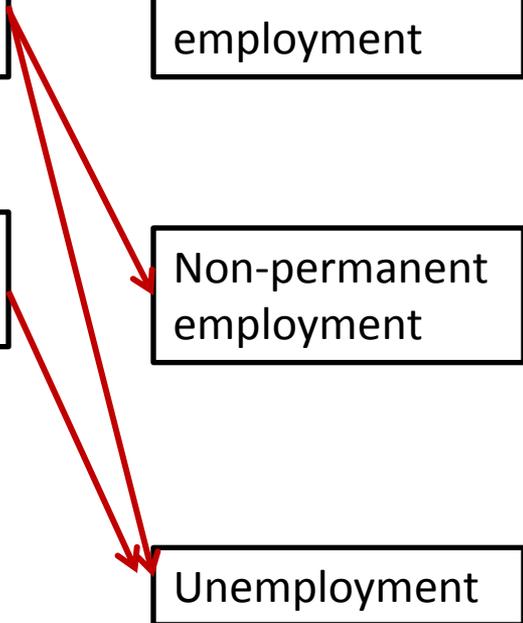
Non-permanent
employment

Follow-up (2007)

Permanent
employment

Non-permanent
employment

Unemployment

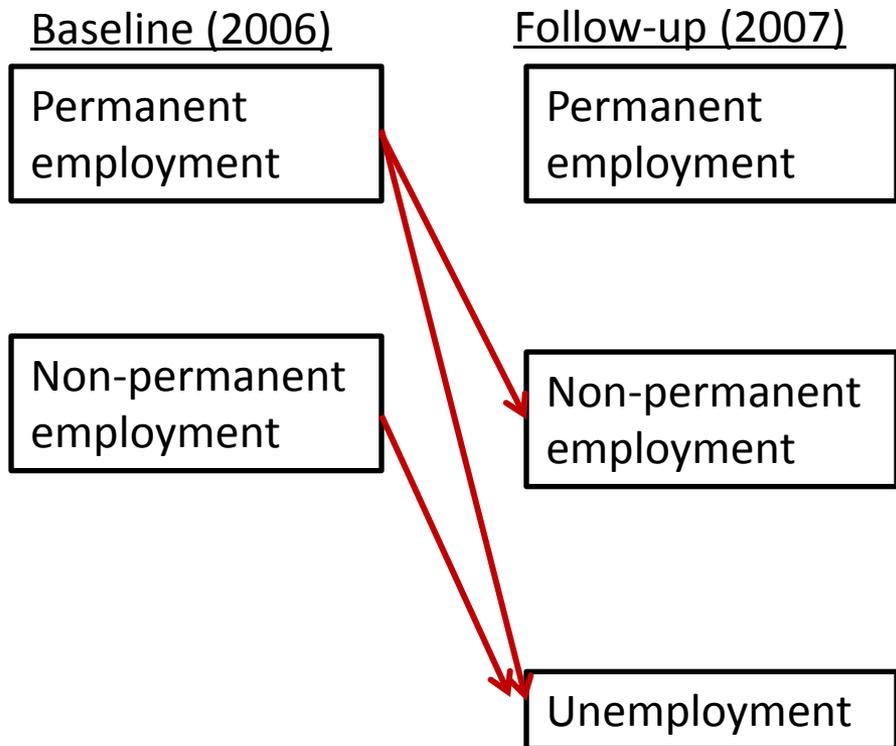


Red arrow : Positive and significant association with developing new-onset depression

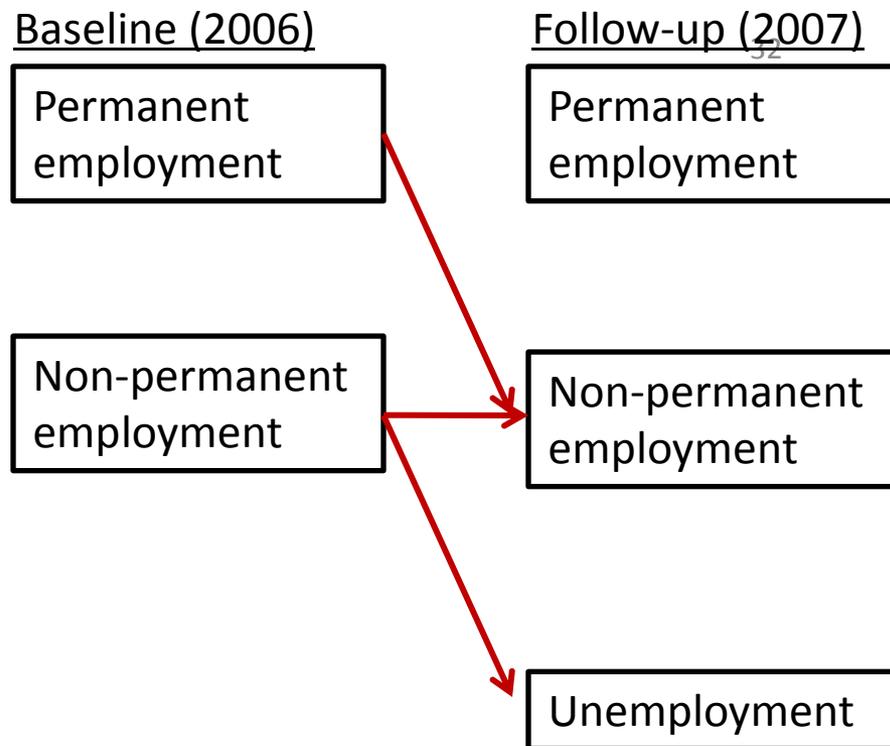
Result 1 and 2

- Change of employment status and depression

Expected associations



Observed associations

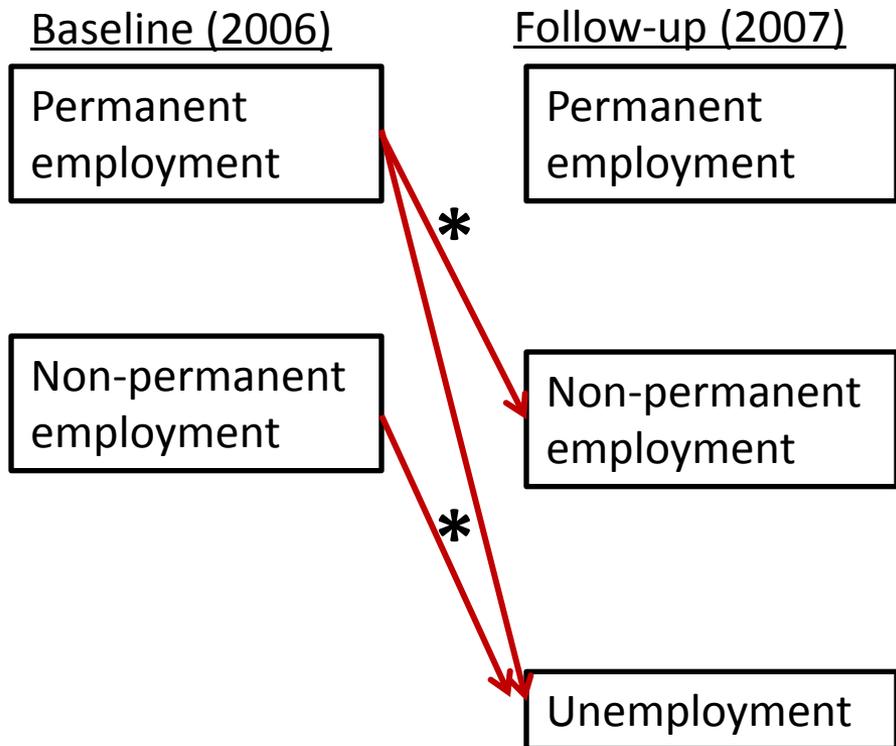


Read arrow : Positive and significant association with developing new-onset depression

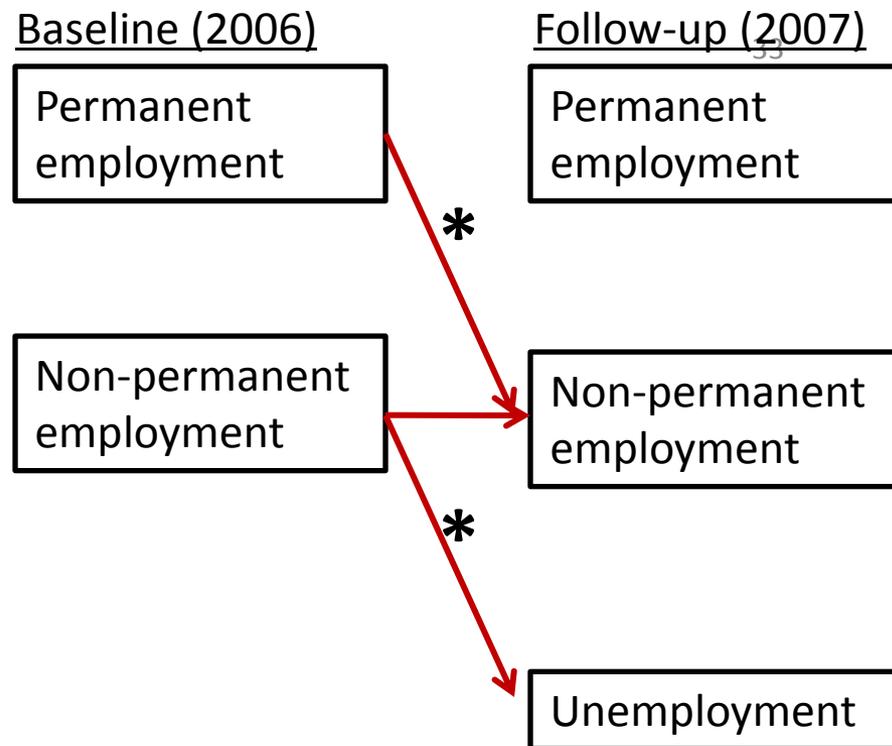
Result 1 and 2

- Change of employment status and depression

Expected associations



Observed associations



Read arrow : Positive and significant association with developing new-onset depression

Result 1 and 2

- Change of employment status and depression

Expected associations

Baseline (2006)

Permanent employment

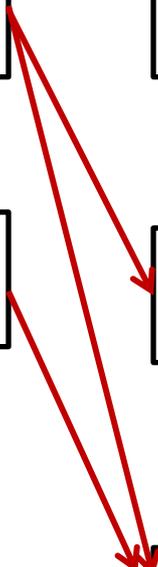
Non-permanent employment

Follow-up (2007)

Permanent employment

Non-permanent employment

Unemployment



Observed associations

Baseline (2006)

Permanent employment

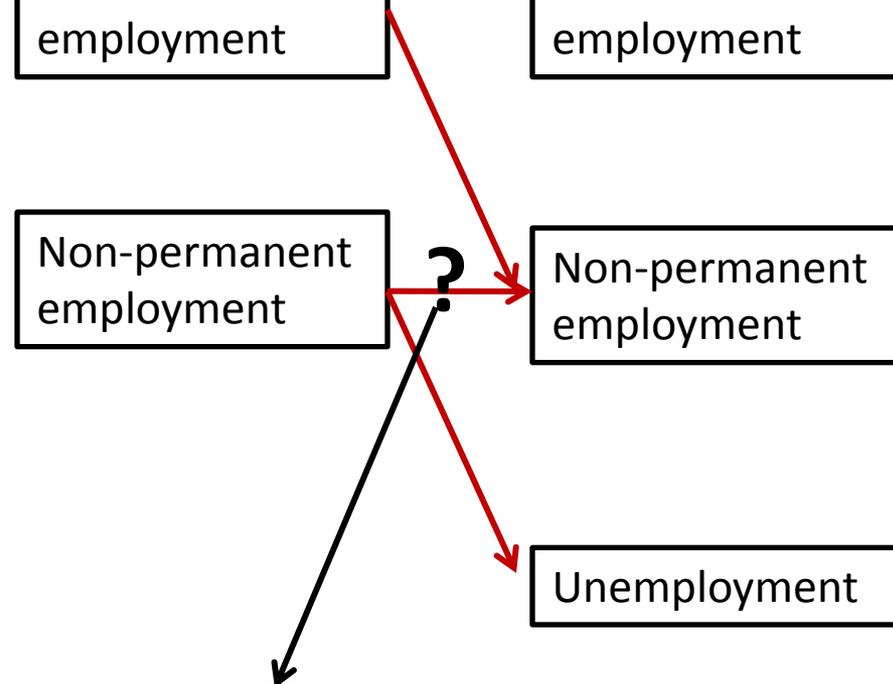
Non-permanent employment

Follow-up (2007)

Permanent employment

Non-permanent employment

Unemployment



Working one more year as non-permanent employee is associated with higher odds of developing new-onset depression.

Result 1 and 2

- Change of employment status and depression

Expected associations

Baseline (2006)

Permanent
employment

Non-permanent
employment

Follow-up (2007)

Permanent
employment

Non-permanent
employment

Unemployment

?

Observed associations

Baseline (2006)

Permanent
employment

Non-permanent
employment

Follow-up (2007)

Permanent
employment

Non-permanent
employment

Unemployment

1. "Double burden to mental health",
2. Permanent employment is more likely to be seen as an "official job"
→ Higher possibility to receive unemployment insurance
3. More resources for the unemployed from permanent employment

Result 3.

-Effect modification by gender

P-value of gender interaction terms in full-population : 0.560

P-value of gender interaction terms in sub-population : 0.045

Change of employment status		Fully adjusted model in ths sub-population					
		Male			Female		
2006	2007	N	OR	95% CI	N	OR	95% CI
Permanent	Permanent	709	1	Referent	329	1	Referent
	Non-permanent	121	1.24	(0.60,2.57)	73	3.17**	(1.36,7.39)
	Unemployed	10	1.59	(0.19,13.09)	15		
Non-permanent	Non-permanent	192	1.76	(1.00,3.10)	182	1.83	(0.85,3.92)
	Permanent	253	0.80	(0.42,1.52)	115	2.82**	(1.32,6.03)
	Unemployed	11	0.94	(0.11,8.07)	10	9.84**	(2.23,43.43)

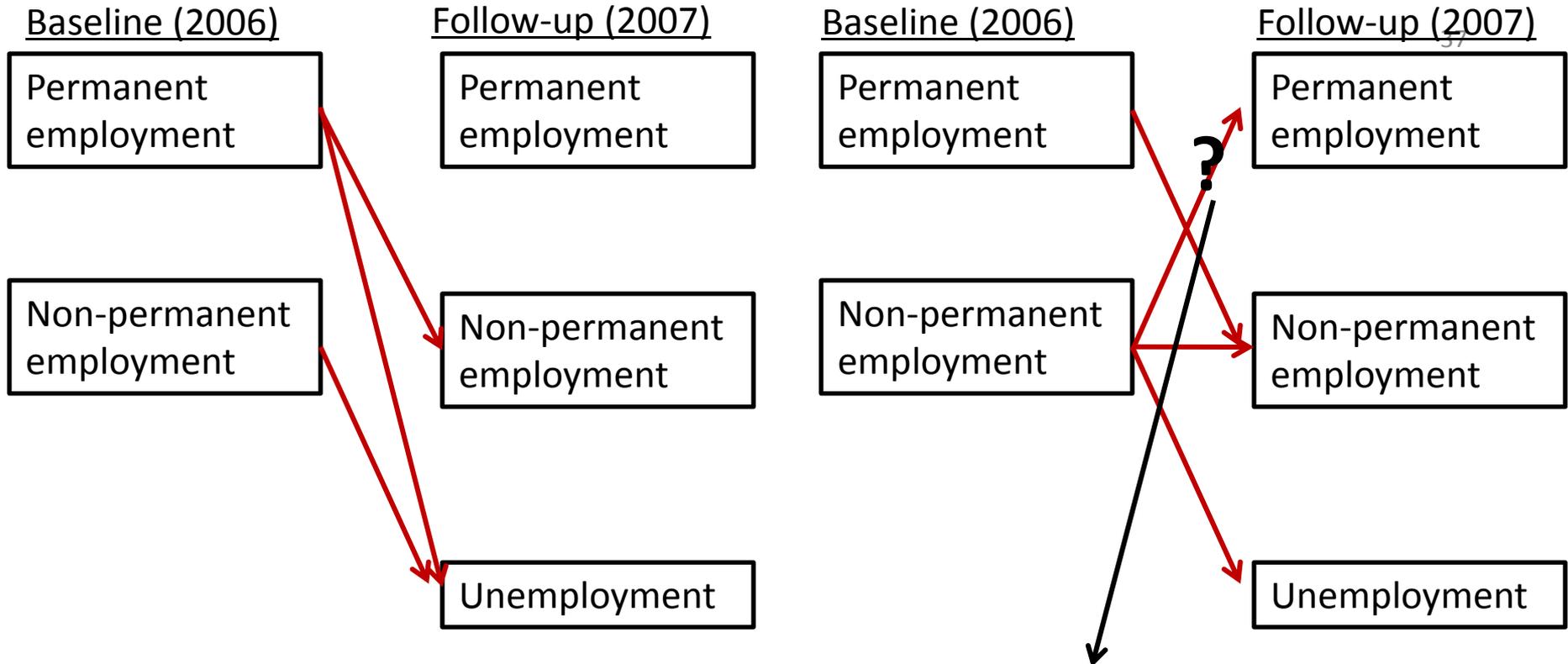
a : Adjusted for age, gender, marital status, educational level, residential area, smoking status, having any chronic disease and any disability at baseline(2006)

Result 3.

-Effect modification by gender

Actual associations in female sub-population

Expected associations



1. Still need to carry out domestic responsibility
 - Part-time workers → Full time workers : More burden at workplace
2. May not be actually better job in terms of wages or working condition

Results from another paper

Change of employment status



Self-rated health

Table 6. Adjusted odds ratio* (and 95% confidence intervals) of self assessed health according to changes of employment status among female

	Model 1 [†]	Model 2 [†]	Model 3 [‡]
Changes of employment status			
Non-precarious	1.00	1.00	1.00
Precarious to non-precarious	1.71 (1.69-1.74)	1.63 (1.60-1.65)	1.89 (1.86-1.92)
Non-precarious to precarious	1.18 (1.16-1.19)	1.08 (1.06-1.09)	1.24 (1.23-1.26)
Precarious	1.09 (1.08-1.10)	1.08 (1.07-1.10)	1.27 (1.25-1.28)

Table 5. Adjusted odds ratio* (and 95% confidence intervals) of self assessed health according to changes of employment status among male

	Model 1 [†]	Model 2 [†]	Model 3 [‡]
Changes of employment status			
Non-precarious	1.00	1.00	1.00
Precarious to non-precarious	1.55 (1.54-1.57)	1.43 (1.41-1.44)	1.58 (1.57-1.60)
Non-precarious to precarious	1.22 (1.21-1.23)	1.06 (1.05-1.07)	1.00 (1.00-1.01)
Precarious	1.60 (1.59-1.61)	1.48 (1.46-1.49)	1.29 (1.28-1.30)

Sample : 1207 men 582 men

Exposure : The change of employment status from 1998 to 2000

Conclusion

- Associated with new-onset depression
 - Becoming unemployed from **non-permanent employment**
 - Changing from permanent to **non-permanent employment**
 - Working one more year as **non-permanent employee**
- Effect modification by gender
 - Changing from non-permanent to permanent employment
 - new onset depression

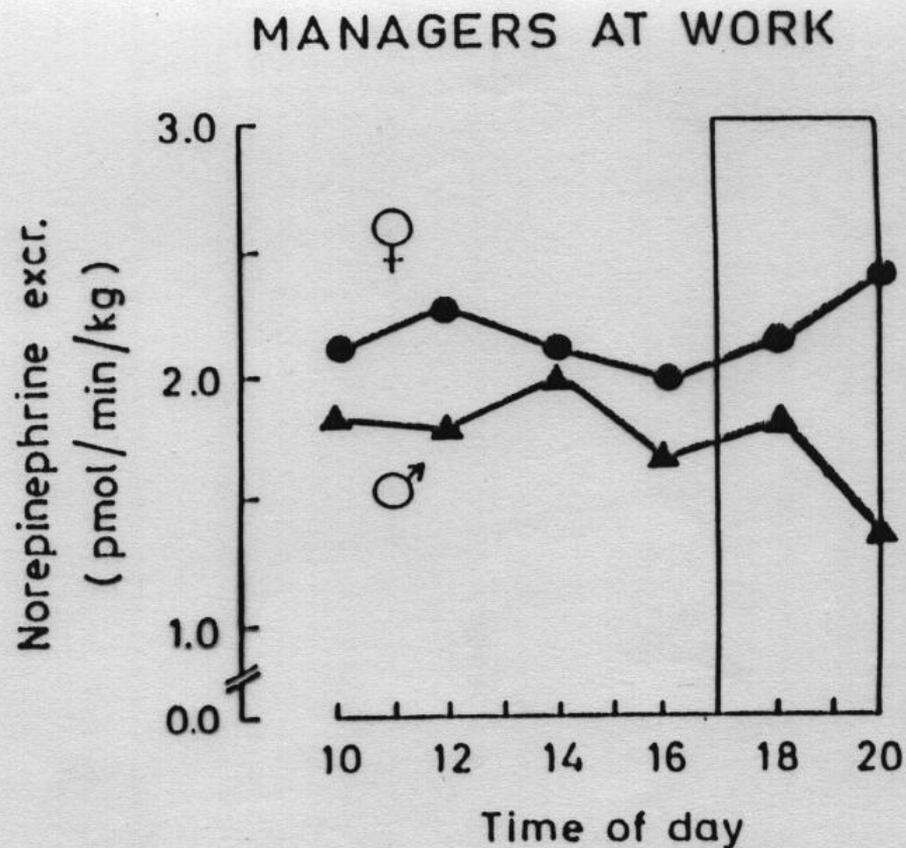
여성 노동자의 몸에 대한 이해

직업보건(Occupational health)

Vs

노동자 건강(Worker's health)

Norepinephrine Excretion in Male and Female Managers During and After a Day at Work (from Frankenhaeuser *et al.* 1989).



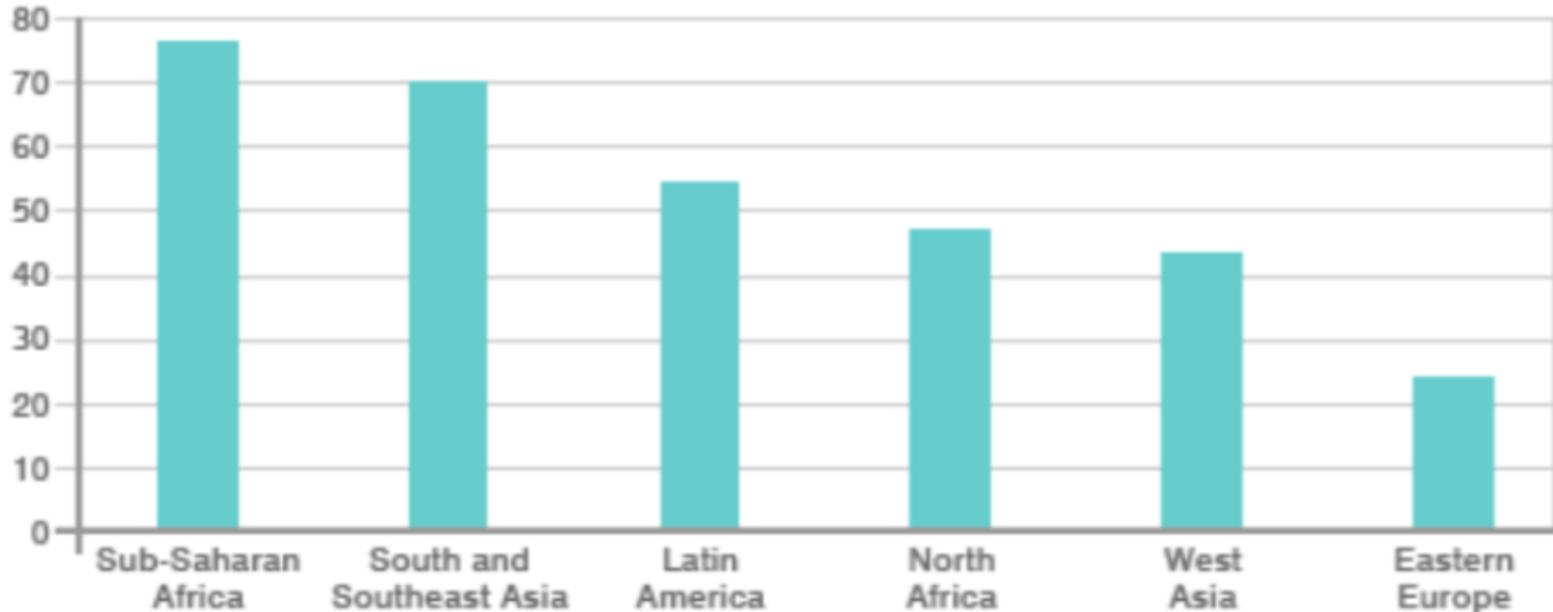
‘비정규직’을 영어로 번역한다면

- Non-standard job?
- Non-regular job?
- Atypical job?

‘비정규직’을 영어로 번역한다면?

INFORMAL EMPLOYMENT

% of employment in informal sector



SOURCE: OECD

- **Is Informal Normal?**

- 1.8 billion people, or more than half of the global labor force in developing countries, are working without formal contracts and social security
- This level is expected to increase to two-thirds of the workforce by 2020

Work-family conflict and its association with self-reported musculoskeletal disorders among hospital patient care workers

Seung-Sup Kim, Cassandra Okechukwu, Jack T. Dennerlein,
Les Boden, Orfeue, Dean M. Hashimoto, Glorian Sorensen

Harvard School of Public Health

Background

Hämmig *et al.* *BMC Musculoskeletal Disorders* 2011, **12**:60
<http://www.biomedcentral.com/1471-2474/12/60>



RESEARCH ARTICLE

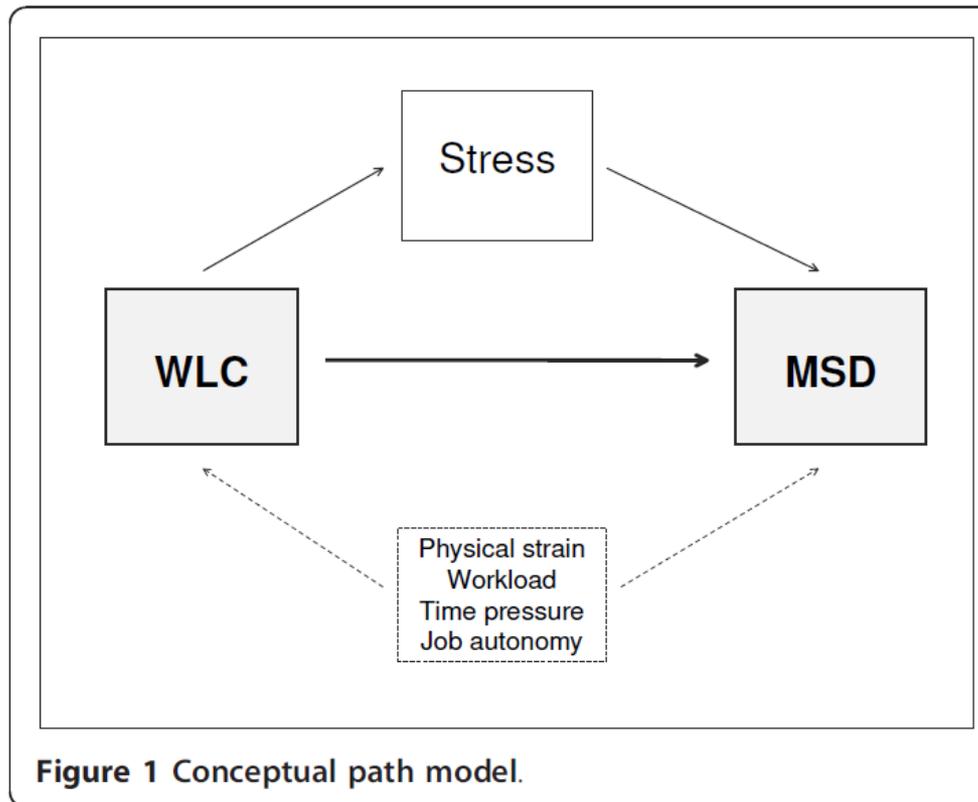
Open Access

Work-life conflict and musculoskeletal disorders: a cross-sectional study of an unexplored association

Oliver Hämmig^{1,2*}, Michaela Knecht^{1,2}, Thomas Läubli^{1,2} and Georg F Bauer^{1,2}

Background

- Conceptual path model linking WLC(Work-life conflicts) and MSD(Musculoskeletal disorders)



Objectives

- What is the association between work-family conflicts and self-reported musculoskeletal disorders(MSDs) among hospital health care workers?

Data sources

- Hospital Health Care Worker Survey
 - These surveys were part of the "Be Well Work Well Study" conducted by the HSPH center for Work, Health, and Wellbeing
 - To evaluate associations of organizational policies and practices and workers' health behaviors with physical and psychosocial exposures on the job
 - 2000 nurses in two large academic hospitals in the metropolitan Boston area in late 2009

Exposure variable

Journal of Applied Psychology
1996, Vol. 81, No. 4, 400–410

Copyright 1996 by the American Psychological Association, Inc.
0021-9010/96/\$3.00

Development and Validation of Work–Family Conflict and Family–Work Conflict Scales

Richard G. Netemeyer
Louisiana State University

James S. Boles
Georgia State University

Robert McMurrian
Louisiana State University

Researchers report on a 3-sample study that developed and validated short, self-report scales of work–family conflict (WFC) and family–work conflict (FWC). Using conceptualizations consistent with the current literature, the researchers offer content domains and definitions of the constructs. Advocated procedures were used to develop the scales and test dimensionality and internal consistency. Estimates of construct validity are presented by relating the scales to 16 other on- and off-job constructs. Mean-level difference tests between WFC and FWC also provide evidence of validity.

Exposure variable

:Work-Family Conflict Scale (Netemyer 1996)

– How much do you agree or disagree with the following statements

- **Answer: 1(strongly agree) to 5(strongly disagree)**
- 1. The demands of my work interfere with my home and family life.
- 2. The amount of time my job takes up makes it difficult to fulfill family responsibilities.
- 3. Things I want to do at home do not get done because of the demands my job puts on me.
- 4. My job produces strain that makes it difficult to fulfill family duties.
- 5. Due to work-related duties, I have to make changes to my plans for family activities.

Outcome variable

- Self-reported MSDs
 - the Standardized Nordic Questionnaire for musculoskeletal symptoms
 - Q: “During the past 3 months, have you had pain or aching in any of the areas shown on the diagram?”
 - The areas were lower back, shoulder, neck, wrist or forearm, knee, ankle or feet, and none of the above.
(picture)

Results

Table 2. Association (Odds Ratio) between work-family conflicts and self-reported musculoskeletal pain in the past 3 months (N= 1,320)

Work-family conflict	Neck/Shoulder pain		Arm pain		Low back pain	
	Unadjusted	Fully adjusted ^a	Unadjusted	Fully adjusted ^a	Unadjusted	Fully adjusted ^a
Low (5-12)	1	1	1	1	1	1
Moderate (13-17)	1.605***	1.611***	1.573*	1.618*	1.905***	1.723***
High (18-25)	2.478***	2.427***	2.732***	2.639***	1.670***	1.427*

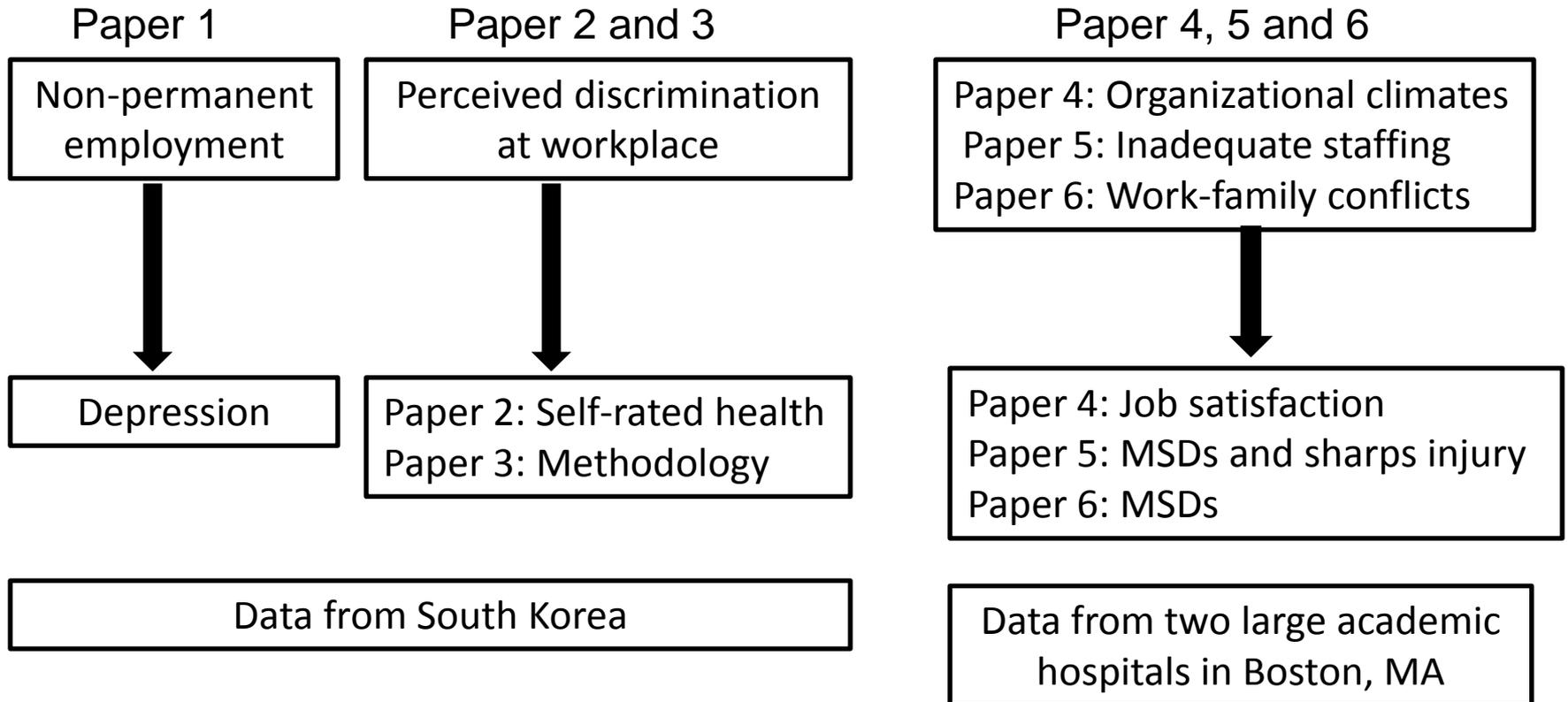
Work-family conflict	Lower extremity		Any musculoskeletal pain		Co-morbidity ^b	
	Unadjusted	Fully adjusted ^a	Unadjusted	Fully adjusted ^a	Unadjusted	Fully adjusted ^a
Low (5-12)	1	1	1	1	1	1
Moderate (13-17)	1.769***	1.745***	2.254***	2.169***	1.881***	1.781***
High (18-25)	2.222***	2.044***	3.121***	2.803***	2.618***	2.385***

*p<0.05, **p< 0.01, *** p<0.001

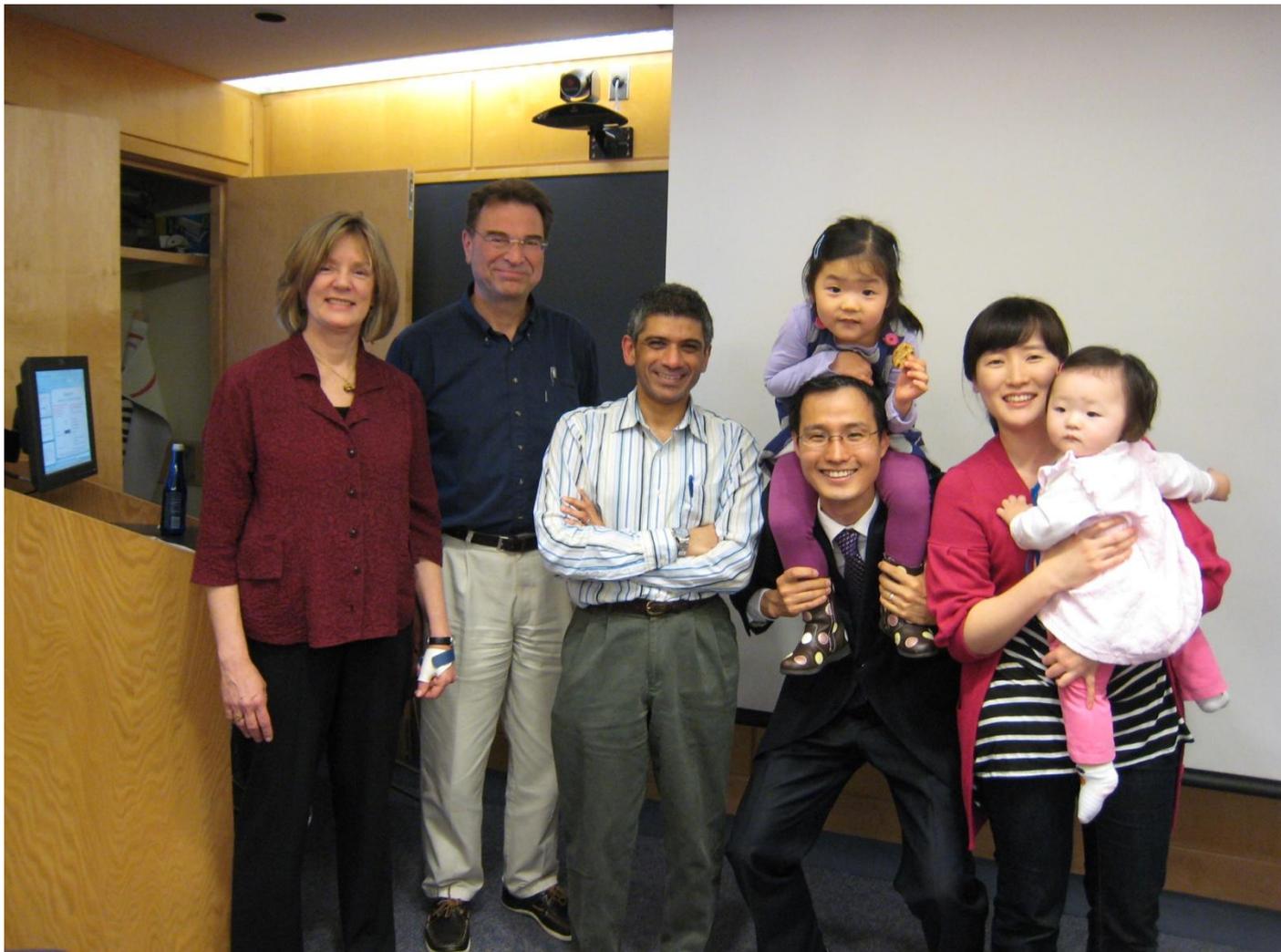
Fully adjusted^a: Adjusted for the number of children (<5 years old, demographic (age, race, gender), capability to pay the bill, occupational condition (Job title, having a second job or not, day shift or not, worked hours per week), type of units, hospital, decision latitude and demands measured by JCQ

Co-morbidity^b: When worker had MSD in more than one body part, then they are coded as 1. Otherwise, they are coded as 0.

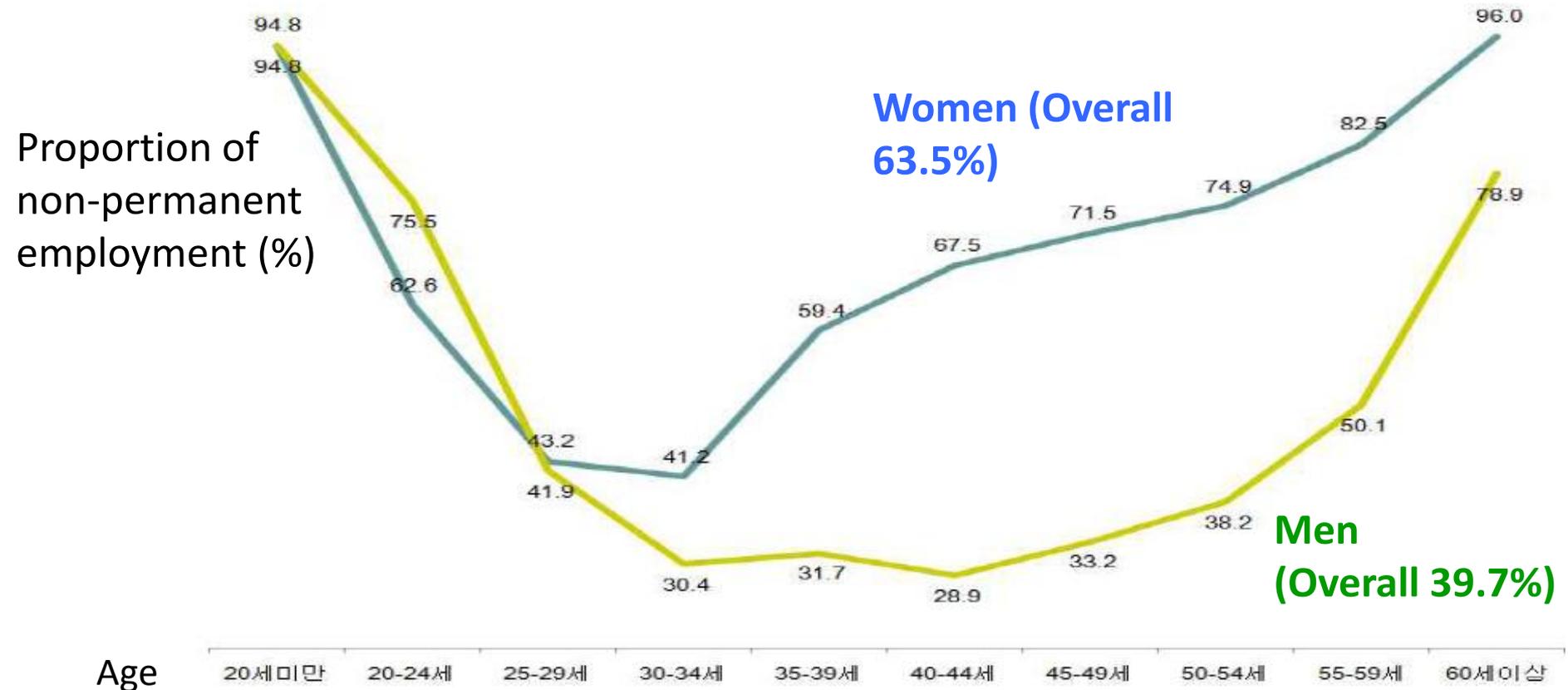
Psychosocial hazards at workplace



End



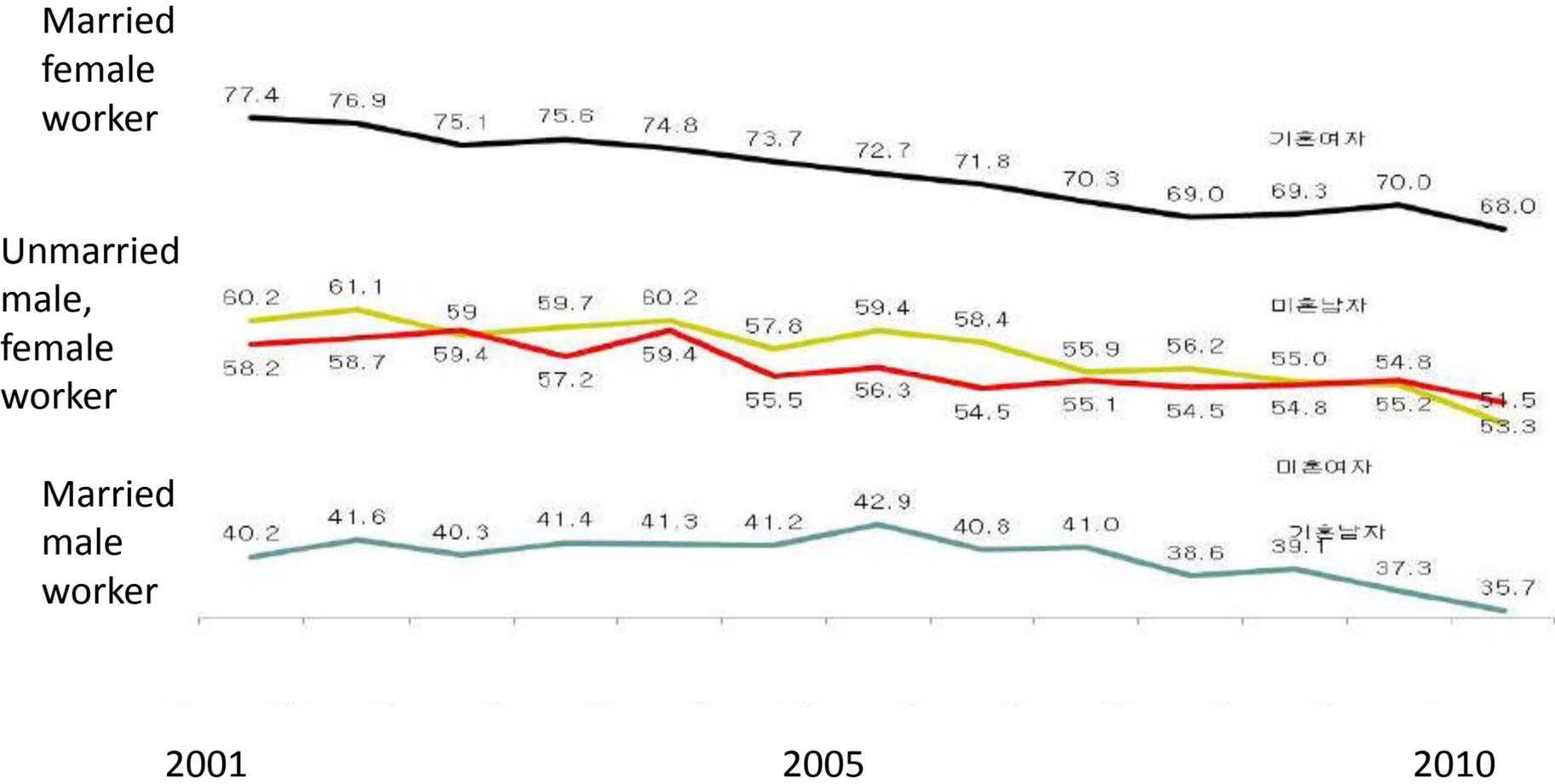
Distribution of non-permanent employment in South Korea by gender



Monthly Report on the Economically Active Population Survey (March 2010)

<http://www.ksli.org/>

The proportion of precarious employment stratified by marital status and sex



Wage by employment status and sex in Korea

- When we think the monthly wage of male permanent worker as 100,

Age (yrs)	Male workers		Female workers	
	Permanent	Precarious	Permanent	Precarious
20-29	100	74	87	65
30-34	100	72	84	51
35-39	100	62	75	41
40-44	100	58	62	34
45-49	100	50	61	32

March 2008, Monthly Report on the Economically Active Population Survey, Statistics Korea

http://h21.hani.co.kr/arti/special/special_general/26513.html

Gender difference of PE

Change of employment status



Self-rated health

Table 6. Adjusted odds ratio* (and 95% confidence intervals) of self assessed health according to changes of employment status among female

	Model 1 [†]	Model 2 [†]	Model 3 [‡]
Changes of employment status			
Non-precarious	1.00	1.00	1.00
Precarious to non-precarious	1.71 (1.69-1.74)	1.63 (1.60-1.65)	1.89 (1.86-1.92)
Non-precarious to precarious	1.18 (1.16-1.19)	1.08 (1.06-1.09)	1.24 (1.23-1.26)
Precarious	1.09 (1.08-1.10)	1.08 (1.07-1.10)	1.27 (1.25-1.28)

Table 5. Adjusted odds ratio* (and 95% confidence intervals) of self assessed health according to changes of employment status among male

	Model 1 [†]	Model 2 [†]	Model 3 [‡]
Changes of employment status			
Non-precarious	1.00	1.00	1.00
Precarious to non-precarious	1.55 (1.54-1.57)	1.43 (1.41-1.44)	1.58 (1.57-1.60)
Non-precarious to precarious	1.22 (1.21-1.23)	1.06 (1.05-1.07)	1.00 (1.00-1.01)
Precarious	1.60 (1.59-1.61)	1.48 (1.46-1.49)	1.29 (1.28-1.30)

Sample : 1207 men 582 men

Exposure : The change of employment status from 1998 to 2000

Continuous scale of precariousness

The Employment Precariousness Scale (EPRES): psychometric properties of a new tool for epidemiological studies among waged and salaried workers

Alejandra Vives,^{1,2,3,4} Marcelo Amable,^{1,2,3} Montserrat Ferrer,^{2,5} Salvador Moncada,⁶
Clara Llorens,^{6,7} Carles Muntaner,^{3,8} Fernando G Benavides,^{1,2} Joan Benach^{1,2,3}

- Vives, A., et al., *The Employment Precariousness Scale (EPRES): psychometric properties of a new tool for epidemiological studies among waged and salaried workers*. *Occup Environ Med*, 2010. **67**(8): p. 548-55.

Paper 2. and 3.

: Continuous scale of precariousness

- Six subscale of precariousness

The EPRES questionnaire is structured, worker reported, and can be self- or interviewer administered. It comprises six subscales: 'temporariness' (contract duration) (two items), 'disempowerment' (level of negotiation of employment conditions) (three items), 'vulnerability' (defencelessness to authoritarian treatment) (six items), 'wages' (low or insufficient; possible economic deprivation) (three items), 'rights' (entitlement to workplace rights and social security benefits) (seven items) and 'exercise rights' (powerlessness, in practice, to exercise workplace rights) (five items) (see online supplement).

Protective effect of non-permanent employment

- “Fixed term employees had less sickness absence than permanent employees, both at baseline and follow up, although job insecurity was significantly higher than in the other groups. This is likely, in part, to be the result of health related selection into fixed term employment. However, this result is also compatible with the assumed “presenteeism” response to the threat of job loss, which implies that job insecurity is one of the “presence factors” in fixed term work. In Finland, social security cover for sick leave is the same for both fixed term and permanent employees after one month’s employment with the same employer”

Virtanen, M. 2003 <From insecure to secure employment: changes in work, health, health related behaviours, and sickness absence>

Typology of countries classified by national economic level and labor market policies.

	More Equal	LABOR MARKET	More Unequal
Core	Social Democratic Labor Institution	Corporatist Labor Institution	Liberal Labor Institution
	Sweden, Denmark, Norway	France, Germany, Austria, Spain	US, UK, Canada
Semi-periphery	Informal Labor Institution	Informal Labor Market, More Successful	Informal, Labor Market, Less Successful
	Chile, Hungary, Poland, Malaysia	Turkey, Thailand, South Africa, Venezuela	Botswana, Gabon, El Salvador
Periphery	Informal market, More successful	Insecurity	Maximum insecurity
	Indonesia, India, Armenia, Pakistan, Bulgaria, Tajikistan, Sudan, Sri Lanka, Mauritania	Nigeria, Jordan, Algeria, Morocco, Egypt, Arab Rep., Iran, Islamic Rep.,	Ethiopia, Ghana, Kenya, Bhutan, Nigeria, China, Bangladesh, Angola

- EMCONET, E.C.K.N., *Employment Conditions and Health Inequalities*, J. Benach, C. Muntaner, and V. Santana, Editors. 2007, World Health Organization.

Employment Conditions Knowledge Network (EMCONET). Final Report, 20 September 2007

Employment Conditions Knowledge Network (EMCONET)

Joan Benach, Carles Muntaner, Vilma Santana (Chairs)

EMCONET was a part of WHO project 'Social Determinants of Health'

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MD: University of Barcelona, School of Medicine (1983)

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PhD: Autonomous University of Barcelona, Spain, Department of Medical Psychology (Social Psychology/ 1985)

Post Doctoral Training: National Institute on Drug Abuse Addiction Research Center, Baltimore, Maryland (Substance Use/ 1986-1989)

MHS: The Johns Hopkins School of Hygiene and Public Health (Psychiatric Epidemiology/ 1989-1992)

Post Doctoral Training: Laboratory of Socio-Environmental Studies, NIMH (Sociology of Mental Disorders/ 1992-1996)



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