

Age moderators of COPSOQ on burnout and work ability

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Funding source



Impact of aging societies on work

- The “graying” of the workforce
 - United States: Baby boomers
 - Born 1946 to 1964, currently 53-72 years old; 78 million
 - Increased longevity due to wealth and health
- In many developed economies, older adults needing to work longer
 - Higher old-age dependency ratio
 - Increase in minimum age for pension benefits
 - Pressure to work longer- worry about outspending savings

If individuals need (or want) to be working longer....



...it is important to understand how to help individuals maintain psychosocial health over time

Social rationale to study nurses

- Critical occupation in societies with aging populations
 - U.S.: predicted shortfall of 260,000 registered nurses in 2025, twice the magnitude of any shortage since 1960 (Buerhaus 2009, Health Affairs)
 - This is moderate crisis compared to longstanding shortages in other countries, including Central and South America



Psychosocial stress in nursing

- Nursing profession recognized for high rates of burnout, high rates of job turnover
- Emotional health in nursing profession is a public health issue with impact on patient care
- Psychosocial work characteristics (PWC) in nursing contribute to emotional strain
 - Emotionally demanding: working with people who have illness, injury, emotional distress
 - Physically demanding
 - Fast-paced, multiple competing demands

Burnout

- Behavioral reaction resulting from the cumulative effects of stressors in the workplace (Demerouti et al., 2001; Maslach et al., 2001; Shirom, 2003).
- Characterized by depletion of physical and emotional resources
- Burnout is associated with adverse work and worker-health outcomes, even after controlling for mental disorders and physical illness (Ahola et al., 2009; Fragoso et al., 2016).

Work ability

- Degree and quality of the interaction between work and the worker. (Hasselhorn, 2008)
 - Physical/health resources
 - Psychological/emotional resources
 - Motivation/engagement
- Lower WAI associated with lower work performance, increased sick leave, & early retirement
- Range of PWC associated with work ability, in both positive and negative directions

Research questions

- How are individual PWC related to age?
- Does age moderate the relationship of PWC to burnout?
- Does age moderate the relationship of PWC to work ability?

Study Sample

Private Health System in North Carolina, USA

- Largest private employer in state of North Carolina (> 10,000 employees)
- Three hospital sites, multiple outpatient clinics
- 2016 total inpatient admissions: 41.408
- 2016 total outpatient visits: 1.119.151



METHODS: Inclusion & recruitment

- Age eligibility 25+
- Other eligibility
 - 2+ years in nursing field
 - Not on active work leave
- Recruited from personnel lists provided by hospital management

Methods: Design & measures

- Cross-sectional baseline with 12-months of longitudinal follow-up
 - Questionnaire Assessments
 - Psychosocial work characteristics
 - Burnout
 - Work ability
- Follow-up
 - Monthly questionnaires via Email
 - PWC, burnout, work ability

Notes:

- Hospital administration had no feedback on which employees participated
- Questionnaires via e-mail linked to an encrypted, password-protected site.



COPSOQ scales* (baseline)

- Quantitative Demands
- Job Insecurity
- Influence + Development
 - Influence at Work
 - Degree of Freedom at Work
 - Possibilities for Development
- Social relations + Leadership
 - Role Clarity
 - Social Support
 - Quality of Leadership

* items selected from PUMA study; Borritz et al. 2006

Burnout (avg. over 12 months)

- Oldenburg Burnout Inventory (OLBI)
 - Exhaustion subscale only
- Examples (on a Likert scale):
 - “I can tolerate the pressure of my work very well”
 - “During my work I often feel emotionally drained”

Work Ability Index (12-month)

- WAI 1: current work ability compared to lifetime best
 - WAI 2: work ability in relation to job demands
 - WAI 3: number of current diseases
 - WAI 4: estimated work impairment due to diseases
 - WAI 5: sick leave during the past year
 - WAI 6: own prognosis of work ability 2 years from now
 - WAI 7: mental resources
- The total score is sum of items
- Range from 7 (bad) to 49 (very good).



RESULTS

Participant Characteristics

Age, Mean (SD), Range	41.7(11.4), 25-67
Sex –Female, n(%)	373 (92.8%)
Education, n(%)	
High School	12 (3.0%)
Associates	106 (26.5%)
Bachelor's	232 (58.0%)
Master's	44 (11.0%)
Doctoral	1 (0.3%)
Race, n(%)	
White	310 (78.1%)
Black/African American	56 (14.1%)
Other	29 (7.3%)
Unknown/Unreported	2 (0.5%)
Marital Status, n(%)	
Unmarried	185 (46.6%)
Married/or legal equivalent	212 (53.4%)

Work Ability among sample

Result

Category and Work ability action

7-27

- Category "poor"
- Reinstate work ability

28-36

- Category "medium"
- Improve work ability

37-43

- Category "good"
- Support work ability

44-49

- Category "very good"
- Maintain work ability

46 + mean 37.61 →
Total mean 38.41 →
25-45 mean 38.89 →

Source: Health Work in an Aging Europe (2006)

Correlations of PWC with age

Scale	r	p-value
Chronic burnout	-.11	.02
Total WAI (12 mo)	-.17	.002
Quantitative Demands	.08	.10
Influence at Work	.11	.03
Degree of Freedom	.21	<.001
Possibilities for Development	-.13	.01
Role Clarity	.04	.41
Social Support	-.09	.08
Leadership	.05	.35
Job Insecurity	.19	<.001

Predictors of chronic burnout

Scale	β (SE)	t	p-value
Quantitative Demands	0.31 (0.05)	6.31	<.001
Influence at Work	-0.18 (0.05)	-3.68	<.001
Degree of Freedom	-0.16 (0.05)	-3.20	.002
Poss for Develop	-0.09 (0.05)	-1.89	.06
Role Clarity	-0.18 (0.06)	-3.22	.001
Social Support	-0.17 (0.05)	-3.06	.002
Leadership	-0.22 (0.05)	-4.38	<.001
Job Insecurity	0.18 (0.05)	3.56	<.001

Note: individual models included age and education; excluded high baseline burnout

Interactions of PWC X age

- There were no significant interactions

Predictors of work ability (12 mo.)

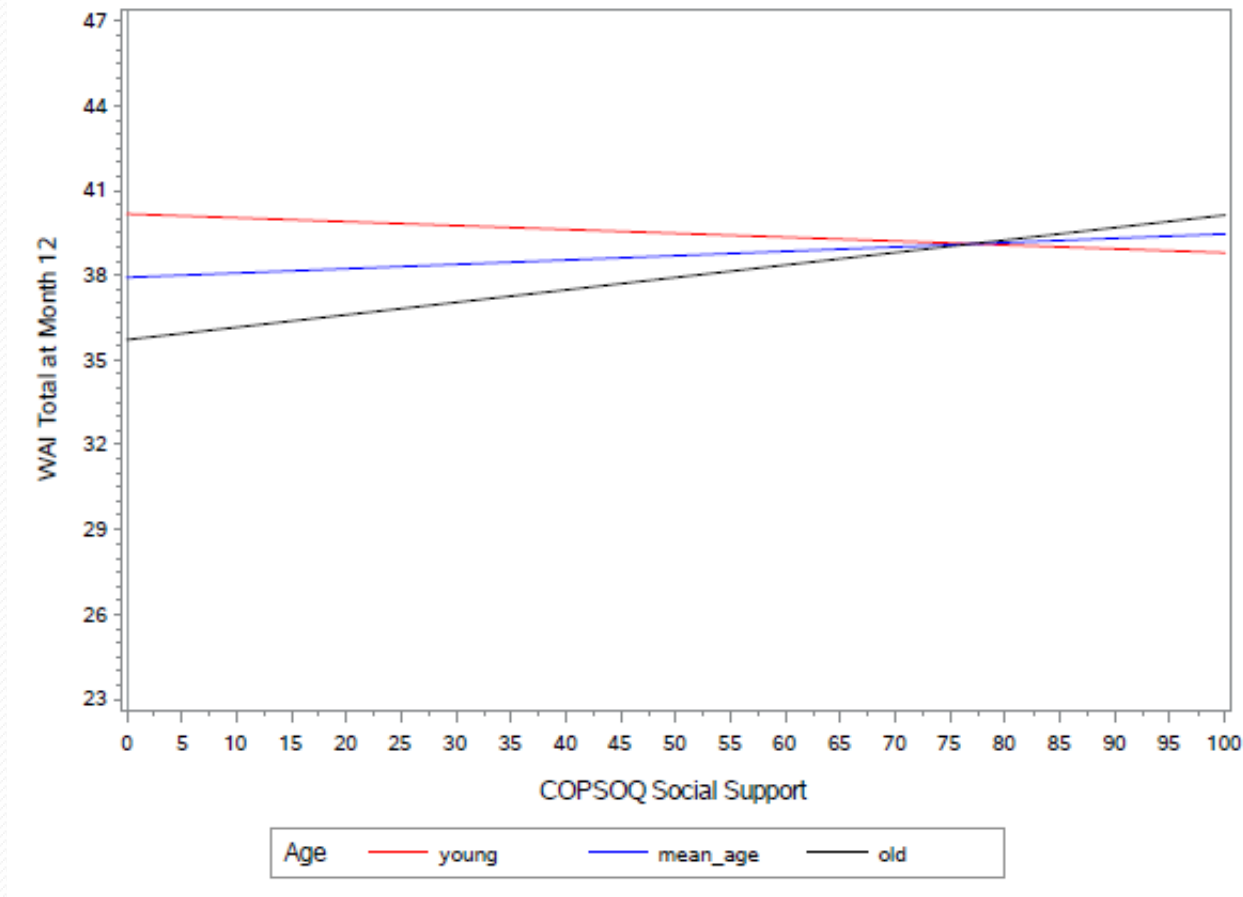
Scale	β (SE)	t	p-value
Quantitative Demands	-0.03 (0.04)	-0.78	.43
Influence at Work	0.10 (0.04)	2.40	.02
Degree of Freedom	0.12 (0.04)	2.77	.006
Poss for Develop	0.03 (0.04)	0.68	.49
Role Clarity	0.03 (0.04)	0.66	.51
Social Support	0.06 (0.04)	1.40	.16
Leadership	0.07 (0.04)	1.68	.09
Job Insecurity	-0.008 (0.04)	-0.18	.85

Note: models covaried for age, education, and total WAI score at baseline

Interactions of PWC X age

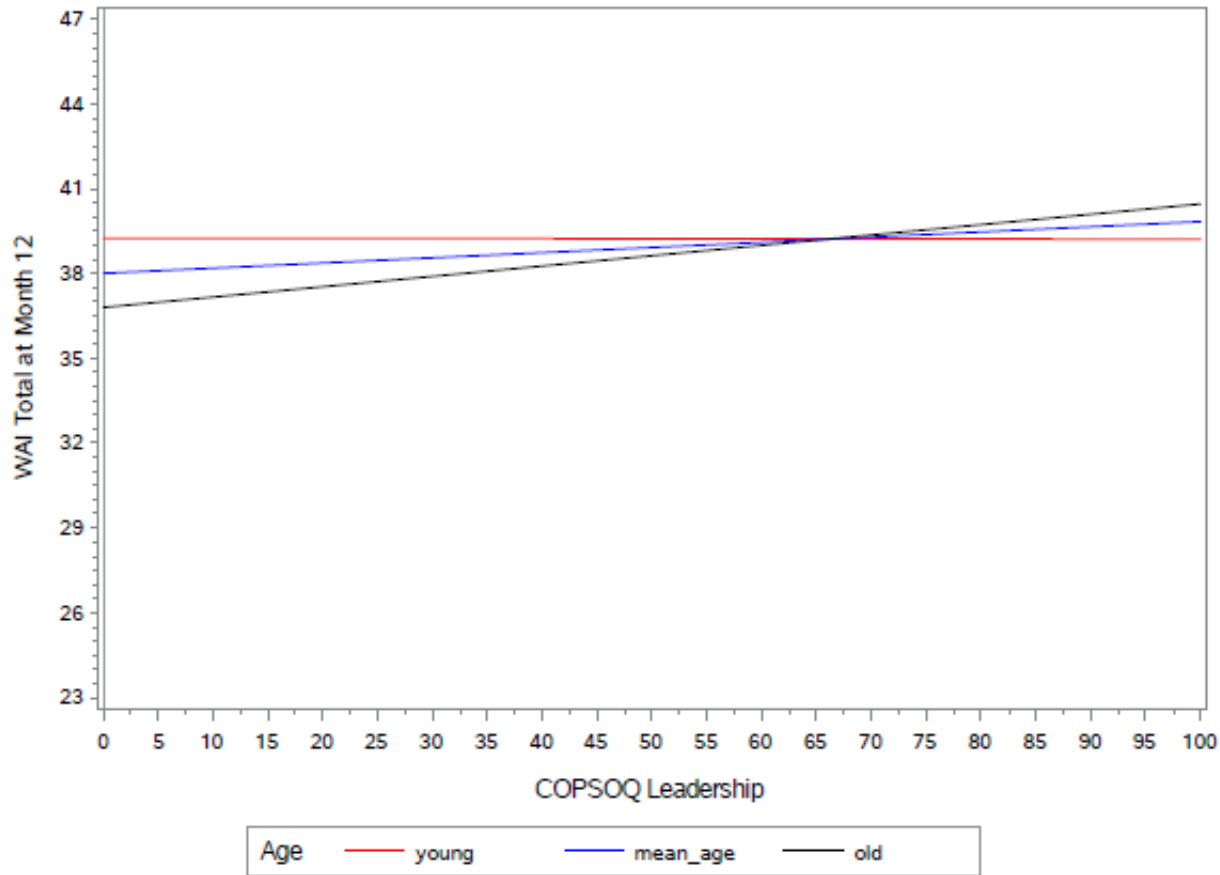
	Young (M=30.3) ^a		Mean Age (M=41.7)		Old (M=53.2)	
Scale	β (SE)	<i>p</i>	β (SE)	<i>p</i>	β (SE)	<i>p</i>
Social Support	-0.05 (0.06)	.42	0.04 (0.04)	.27	0.13 (0.05)	.01
Leadership	0.002 (0.06)	.97	0.08 (0.04)	.06	0.15 (0.06)	.01
Job Insecurity	0.99 (0.38)	.009	0.30 (0.25)	.23	-0.40 (0.28)	.15

Social Support X age



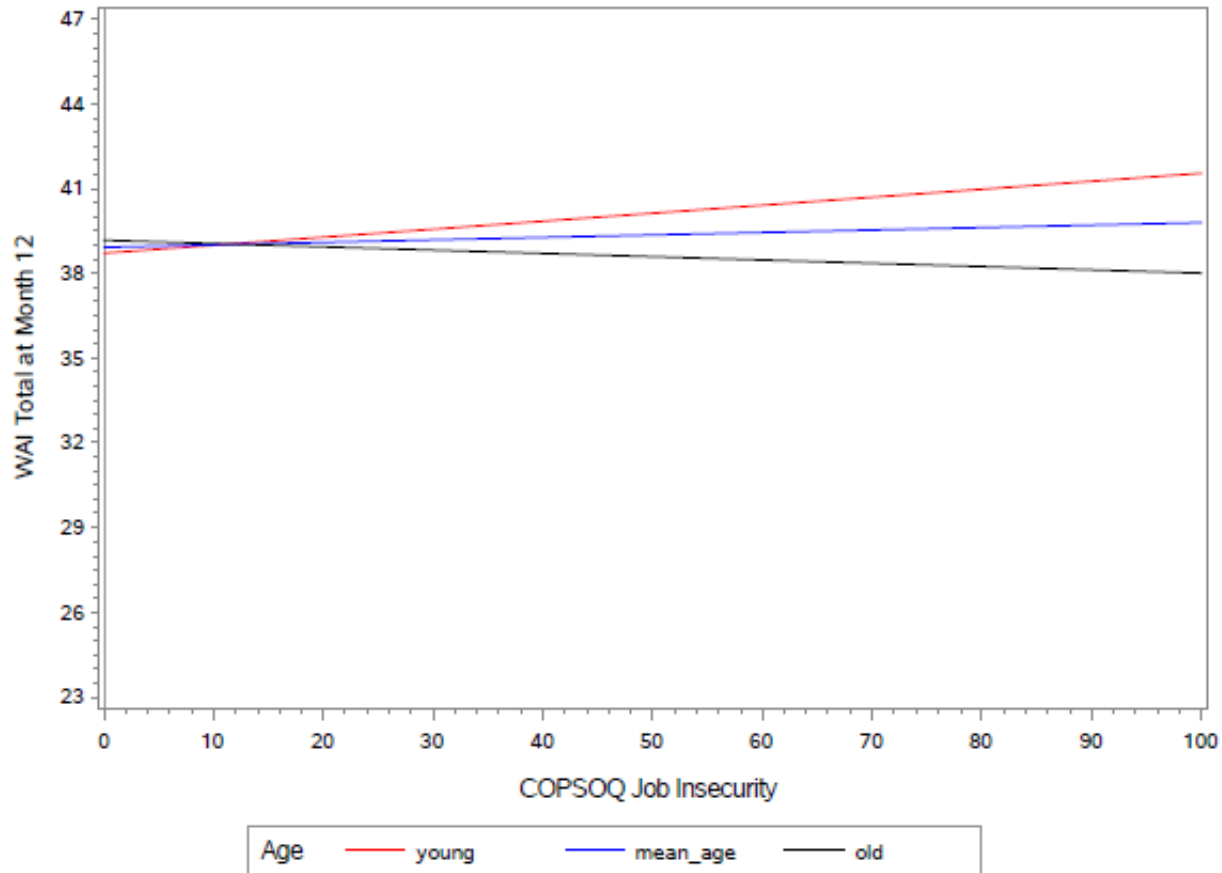
Older workers may need more support to maintain work ability

Leadership x age



Quality of leadership appears to benefit work ability with age

Job Insecurity x age



Younger workers appear to improve work ability over time with job insecurity

DISCUSSION

- PWC are not unitary in the nursing profession– specific characteristics have different associations with aging
 - Older nurses feel they have greater influence and freedom in their work; however...
 - Older nurses feel they lack opportunities for job growth and have more job insecurity

DISCUSSION

- Chronic burnout associated with multiple PWC (not a novel finding), and appears consistent across age

DISCUSSION

- Work ability more selectively related to PWC
- Job autonomy (freedom and influence) at work broadly promotes work ability
- Social factors (leadership and support) are important to work ability with age
 - Suggests that work may take on more social/interpersonal meaning with age (rather than financial)

Implications for COPSOQ

- Common to stratify by sex in analysis
- May also be important to stratify by age
 - May depend on occupational sector

Suggestions to support an aging workforce

- Skill building and growth opportunities throughout career
 - May increase employability within or outside organization
- Input and decision latitude in work activities
 - Leverage experience and institutional knowledge

Suggestions to support an aging workforce

- Provide opportunities for older workers to mentor younger workers (this could be bidirectional)
- Educate leaders in needs of older workers

Limitations of current research

- Limited number of COPSOQ scales
- WAI is overly broad
 - psychological vs. physical work ability may have differential effects
- Limited data on specific nursing role/unit
- Generalizability of nursing to other occupations

Thank you!



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