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Workplace violence and musculoskeletal pain: A 2-year follow-up of nursing home workers

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Presenter Disclosures

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The following personal financial relationships with commercial interests relevant to this presentation existed during the past 12 months:


“No relationships to disclose”



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Background


- ☐ A previous study found higher risk of musculoskeletal symptoms (MS Sx) in nursing home workers reporting recent physical assault at work
- ☐ The causal direction could not be confirmed due to cross-sectional design
- ☐ We re-examined this association in prospective data from the same population



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Worker Surveys


- ☒ 18 nursing homes: all direct care workers (Registered and Licensed Practical Nurses, Certified Nursing & Medical Aides)
- ☒ Three consecutive annual surveys
- ☒ Self-administered questionnaires distributed and collected at work (no formal release time)
- ☒ \$20 compensation for time and effort



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Key Survey Items

- ☒ In the past 3 months, have you been hit, kicked, grabbed, shoved, pushed or scratched by a patient, patient's visitor or family member while you were at work?
 - No (0), 1 time, 2 times, 3 times, > 3 times
- ☒ Musculoskeletal symptoms in low back, shoulders, wrist/hand, knees
 - I. Any (yes/no)
 - II. Number of body areas (3-4 vs 0-2)
 - III. Moderate, severe, extreme vs none/mild
 - IV. Pain interference with work




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Survey Results (1)

Response rates: 72% baseline; 75% 1-yr; 73% 2-yr
Questionnaires collected from 1506 direct care workers:

- 89% female
- Average age: 41±13 yr
- Experience in the same type of work: 11±10 yr
- All shifts:

Day	47%
Evening	21%
Night	14%
Rotate/other	18%




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Survey Results (2)

Complete questionnaires from all 3 consecutive annual surveys were obtained from 344 workers, of whom 93% were clinical staff:

- Nursing aides (CNA's, CMA's) 244
- Licensed practical nurses (LPNs) 52
- Registered nurses (RNs) 48

Demographic and other occupational characteristics were similar to the full survey population.




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Baseline characteristics of participants with complete data (3 repeated measurements)

No. of physical assaults			
0		150	45%
1-2		91	27%
3+		91	28%


Musculoskeletal symptoms			
Any		248	72%
Widespread (3-4 sites)		63	18%
Intense (moderate +)		181	54%
Interferes with work		117	35%



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Pain outcomes at 1-year and 2-year follow-up, by baseline assault frequency

Baseline no. of assaults	Pain in any body area, %		Widespread pain, %		Pain intensity Moderate+, %		Pain interferes with work, %	
	1-yr	2-yr	1-yr	2-yr	1-yr	2-yr	1-yr	2-yr
0 (n=133-150)	57	58	11	11	40	39	30	34
1-2 (n=86-91)	62	76	23	16	56	65	41	49
3+ (n=87-91)	84	80	31	22	68	67	48	47

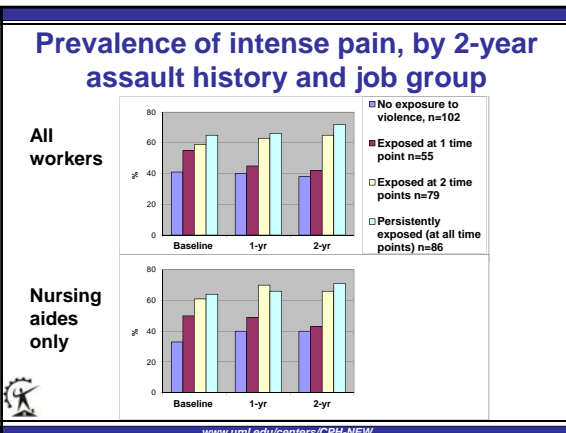


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Risk of pain outcomes at 1-year, by number of assaults at baseline

Baseline assaults	Pain in any body area		Widespread pain		Pain intensity moderate+		Pain interferes with work	
	RR	95% CI	RR	95% CI	RR	95% CI	RR	95% CI
0	1		1		1		1	
1-2	1.2	1.0-1.6	2.5	1.3-4.7	1.6	1.2-2.2	1.7	1.2-2.4
3+	1.4	1.2-1.8	2.4	1.3-4.4	1.6	1.2-2.1	1.6	1.1-2.3

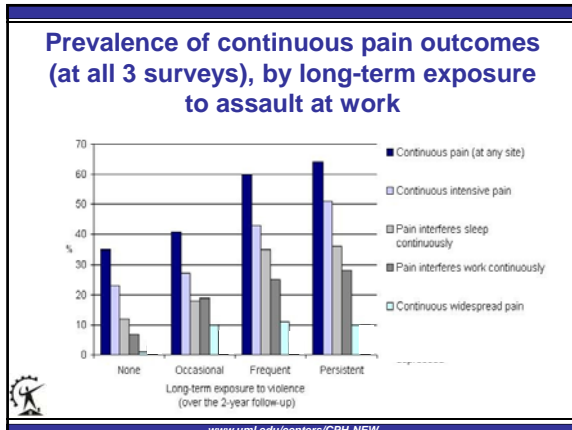
*Adjusted for age, gender, ethnic background, education, job group, physical demands of work, psychological demands of work, job control, supervisor support and work-family imbalance at baseline.



Risk of pain outcomes at 2-year, by persistence of assault frequency

Long-term exposure	Pain in any body area		Widespread pain		Pain intensity moderate+		Pain interferes with work	
	RR	95% CI	RR	95% CI	RR	95% CI	RR	95% CI
No	1		1		1		1	
Occasional	0.9	0.6-1.3	2.8	1.2-6.7	1.1	0.7-1.8	1.3	0.8-2.1
Frequent	1.3	1.0-1.8	3.2	1.4-7.3	1.5	1.1-2.2	1.6	1.0-2.6
Persistent	1.3	1.0-1.8	2.0	0.8-5.0	1.7	1.2-2.4	2.0	1.3-3.1

*Adjusted for age, gender, ethnic background, education, job group, physical demands of work, psychological demands of work, job control, supervisor support and work-family imbalance at baseline.



Discussion & Conclusions

- ☐ While assault frequency was assessed by self-report, these data were obtained 1-2 yrs before the MSD Sx
- ☐ The prospective design largely removes the temporal ambiguity of the association
- ☐ Possible mechanisms include the mediating role of psychological stress, e.g., anxiety
- ☐ Workplace assault is not commonly recognized as a contributing factor or potential confounder of MSD Sx
- ☐ The high persistence (or recurrence) of workplace assault in nursing homes needs urgent attention

Contacts and Acknowledgements

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<p>CPH-NEW main website: www.uml.edu/centers/CPH-NEW</p>	

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