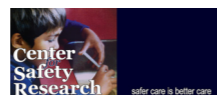


structural interventions against physician burnout resident schedule

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SickKids®



disclosures

Named inventor: Patent Bedside Paediatric Early Warning System. Owner the Hospital for Sick Children.

Shares: Bedside Clinical Systems - a clinical decision support company in part owned by the Hospital for Sick Children.



schedule?

personal | *professional*

stressors
mitigation

crashes
circadian rhythm disrupt
sleep deprivation
physical symptoms
debt & exams

work content
workload
environment/ culture

Individual
Effects

family
positive relationships
vacation
hobbies

staff support
supervision
reward
recognition

Patient safety, resident well-being and continuity of care with different resident duty schedules in the intensive care unit: a randomized trial

Christopher S. Parshuram MB ChB DPhil, Andre C.K.B. Amaral MD, Niall E. G. Ross Baker PhD, Edward E. Etchells MSc MD, Virginia Flintoft BN MSc, Lorelei Lingard PhD, Haresh Kirpalani BM MSc, Sangeeta Mehta MD, Har Damon C. Scales MD PhD, Thomas E. Stewart MD, Andrew R. Willan PhD, for the Canadian Critical Care Trials Group

Author audio interview: soundcloud.com/cmajpodcasts/parshuram-resident. Author video summary: www.youtube.com/watch?v=4cmajpodcast
 /suppl/doi:10.1503/cmaj.140752-/DC2

47 (96%) residents

2 adult ICU

3 schedules

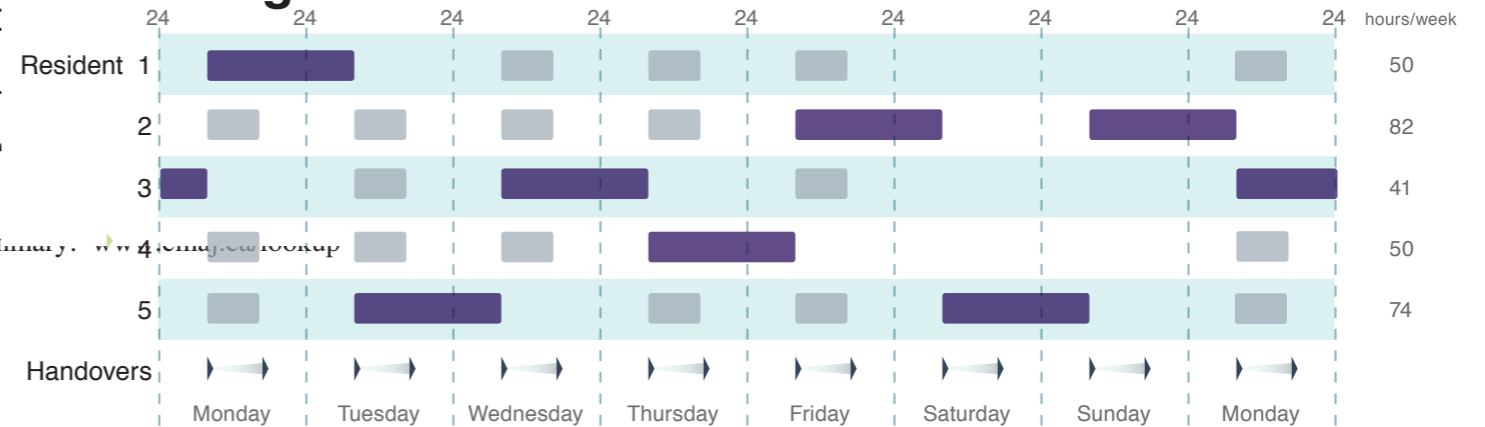
12h 7/8 harmful errors

least favoured

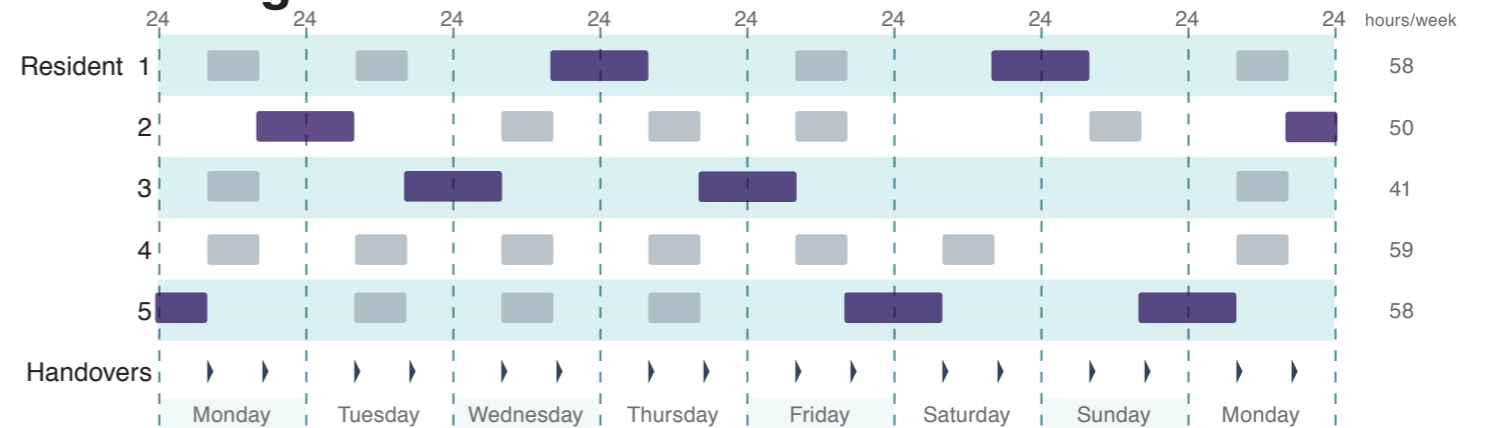
16h patients known less

24h worst symptoms

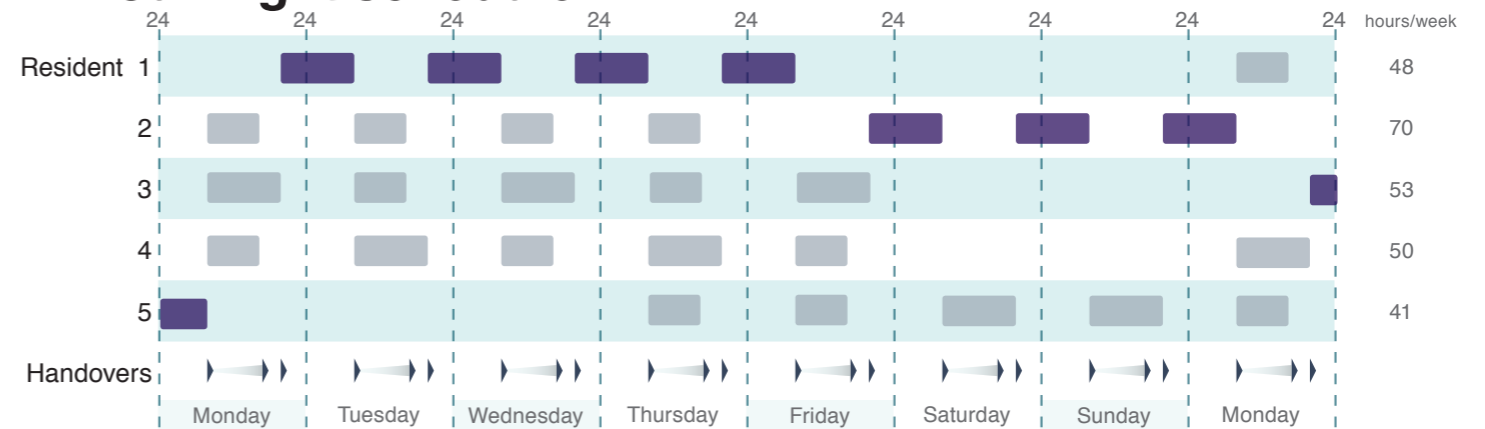
24-hour night schedule



16-hour night schedule

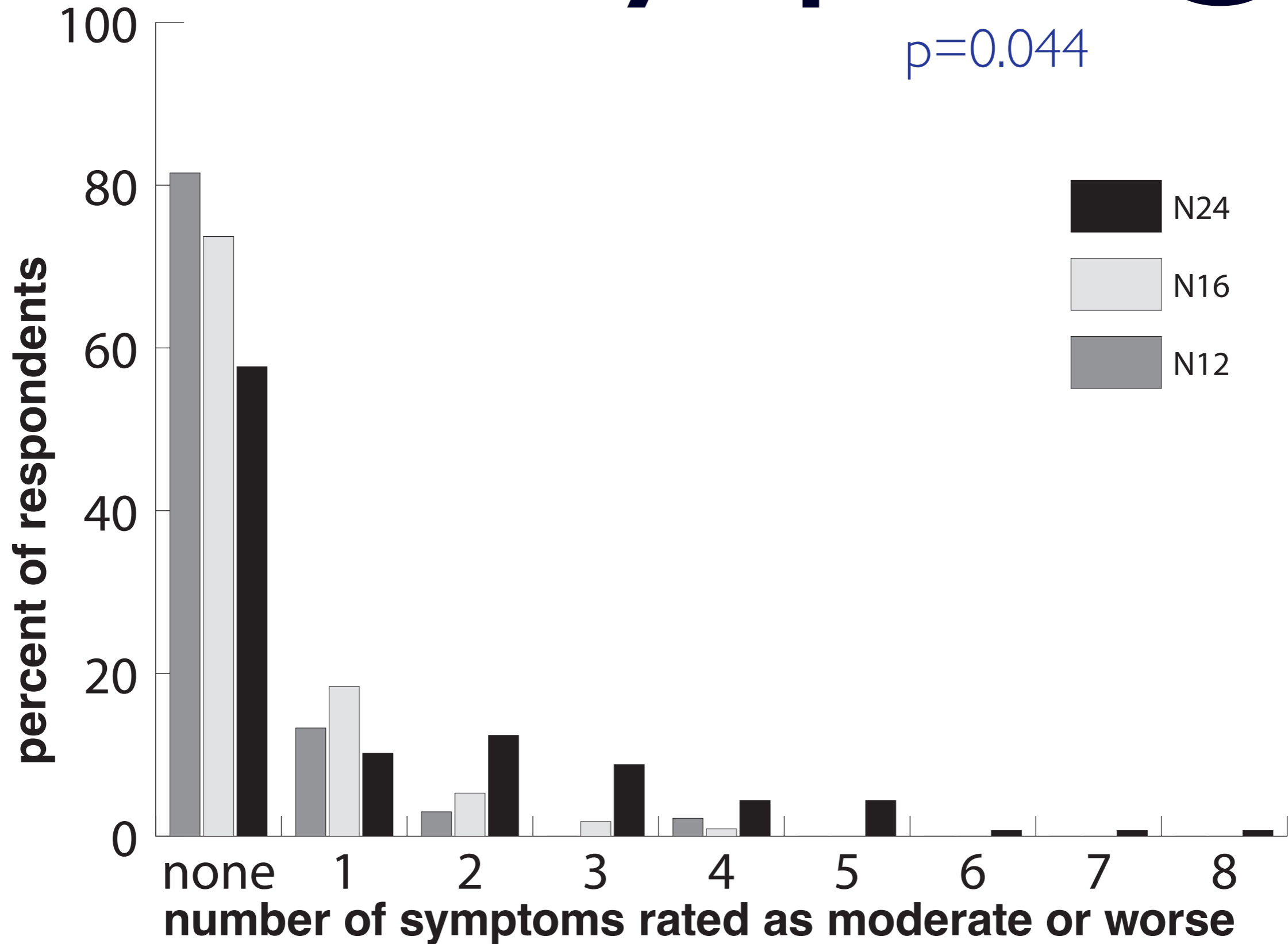


12-hour night schedule

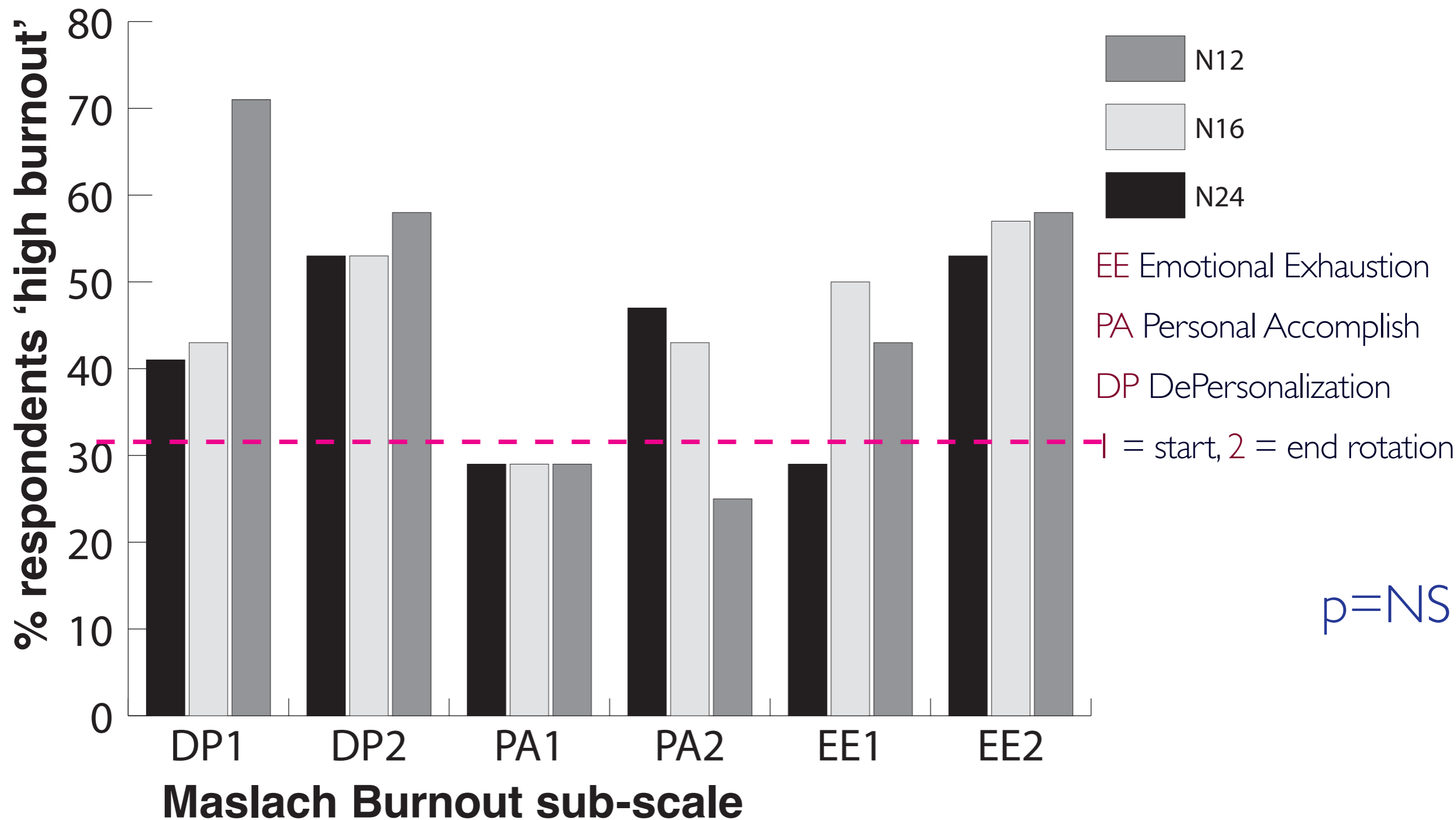


moderate.symptoms@8

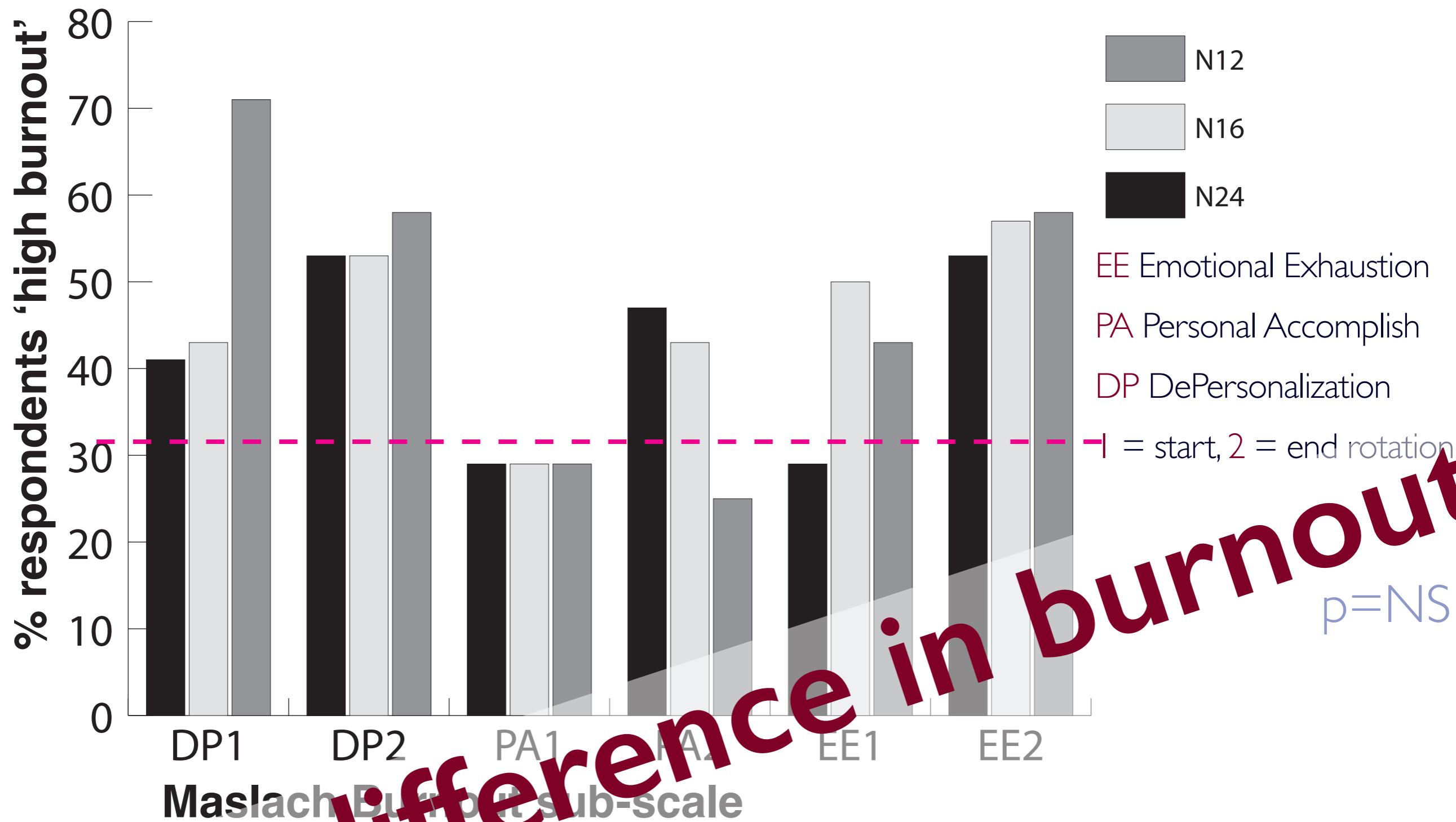
p=0.044



Burnout inventory



Burnout inventory



High-level burnout

Residents with High degree of burnout by MBI domain

rotation	start (n=45)	end (n=41)	difference
Emotional Exhaustion	51%	59%	+8%
Depersonalization	29%	39%	+10%
Personal Accomplishment	40%	56%	+16%

Modest numbers of individual residents tested,
non-significant, but consistent increases across domains
> 2months in ICU may increase resident burnout.

interpretation

1 Baseline Emotional Exhaustion

pre-existing /system issue

2 No difference between ICU schedules

but low power to exclude important effect

3 ICU Environment $>$ ICU Schedule

2 months in ICU may increase burnout

for sleepiness: working at night $>$ schedule

the ICU environment

12-20% mortality

conflict & characters

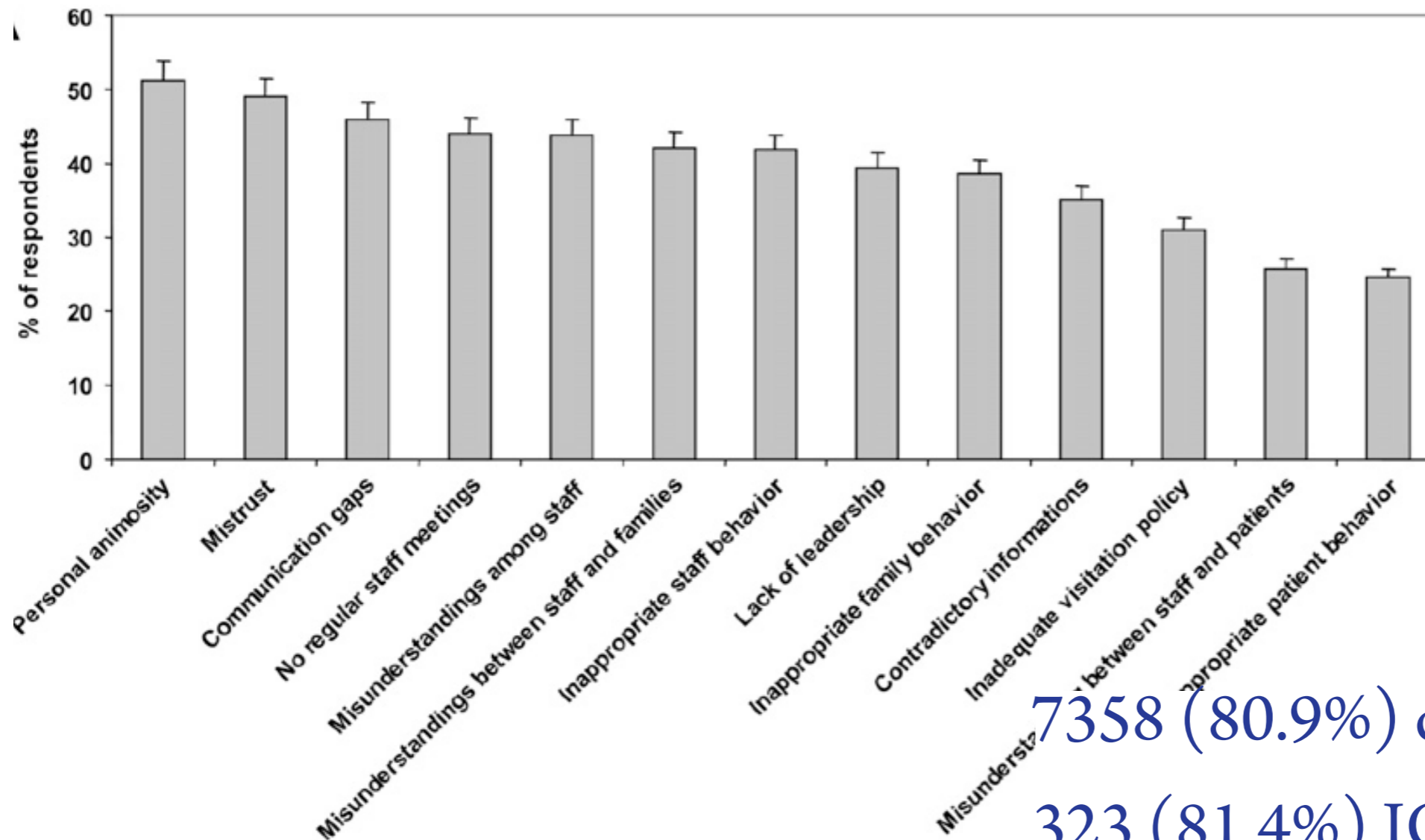
burnout

moral distress

Prevalence and Factors of Intensive Care Unit Conflicts

The Conflicus Study

Élie Azoulay¹, Jean-François Timsit², Charles L. Sprung³, Marcio Soares⁴, Kateřina Rusinová⁵, Ariane Lafabrie¹, Ricardo Abizanda⁶, Mia Svantesson⁷, Francesca Rubulotta⁸, Bara Ricou⁹, Dominique Benoit¹⁰, Daren Heyland¹¹, Gavin Joynt¹², Adrien Français², Paulo Azevedo-Maia¹³, Radoslaw Owczuk¹⁴, Julie Benbenishty³, Michael de Vita¹⁵, Andreas Valentin¹⁶, Akos Ksomos¹⁷, Simon Cohen¹⁸, Lidija Kompan¹⁹, Kwok Ho²⁰, Fekri Abroug²¹, Anne Kaarlola²², Herwig Gerlach²³, Theodoros Kyprianou²⁴, Andrej Michalsen²⁵, Sylvie Chevret²⁶, and Benoît Schlemmer¹, for the Conflicus Study Investigators and for the Ethics Section of the European Society of Intensive Care Medicine*



7358 (80.9%) questionnaires

323 (81.4%) ICUs | 24 countries

5268 = 71.6% reported ≥ 1 conflict

burnout

47% French Intensivists

Embriaco 2007

30% Paediatric Intensivists

Levi 2004

14% Paediatric Intensivists

Fields 2005

33% French ICU Nurses

Poncet 2007

historical levels ~ versus population level
more recent levels higher ...

High Level of Burnout in Intensivists

Prevalence and Associated Factors

Nathalie Embriaco¹, Elie Azoulay², Karine Barrau³, Nancy Kentish⁴, Frédéric Pochard⁵, Anderson Loundou³, and Laurent Papazian¹

¹Medical Intensive Care Unit, Hôpital Sainte-Marguerite Teaching Hospital, Université de la Méditerranée, Marseille, France; ²Medical Intensive Care Unit, Saint Louis Teaching Hospital, Paris, France; ³Laboratoire de Santé Publique, Faculté de Médecine, Marseille, France; ⁴Département de Sociologie, Université Victor Segalen, Bordeaux, France; and ⁵Maison des Adolescents, Cochin-Port Royal Teaching Hospital, Paris, France

cross-sectional, 198 French ICUs

978 physician respondents, 38% trainees (fellows, interns)

59+/- 12 hours worked / week

24% symptoms of depression

46.5% high degree of burnout

higher MBI scores

independently associated :

- 1 female sex
 - 2 the number of night shifts per month
 - 3 a longer period of time from the last nonworking week,
 - 4 night shift before the survey (the cause or as done more often?)
 - 5 conflict with another colleague intensivist (the cause or effect?)
 - 6 conflict with (a) nurse (the cause or effect?)
- & Protective: relationship quality with chief nurses & nurses
- & **NOT** severity of illness of patient factors, or worked hours.

Moral Distress in PICU and Neonatal ICU Practitioners: A Cross-Sectional Evaluation

Charles Philip Larson, MD, FRCPC¹; Karen D. Dryden-Palmer, RN, PhD(c)²;
Cathy Gibbons, MBBChBAO, MRCPI³; Christopher S. Parshuram, MBChB, DPhil, FRCP⁴

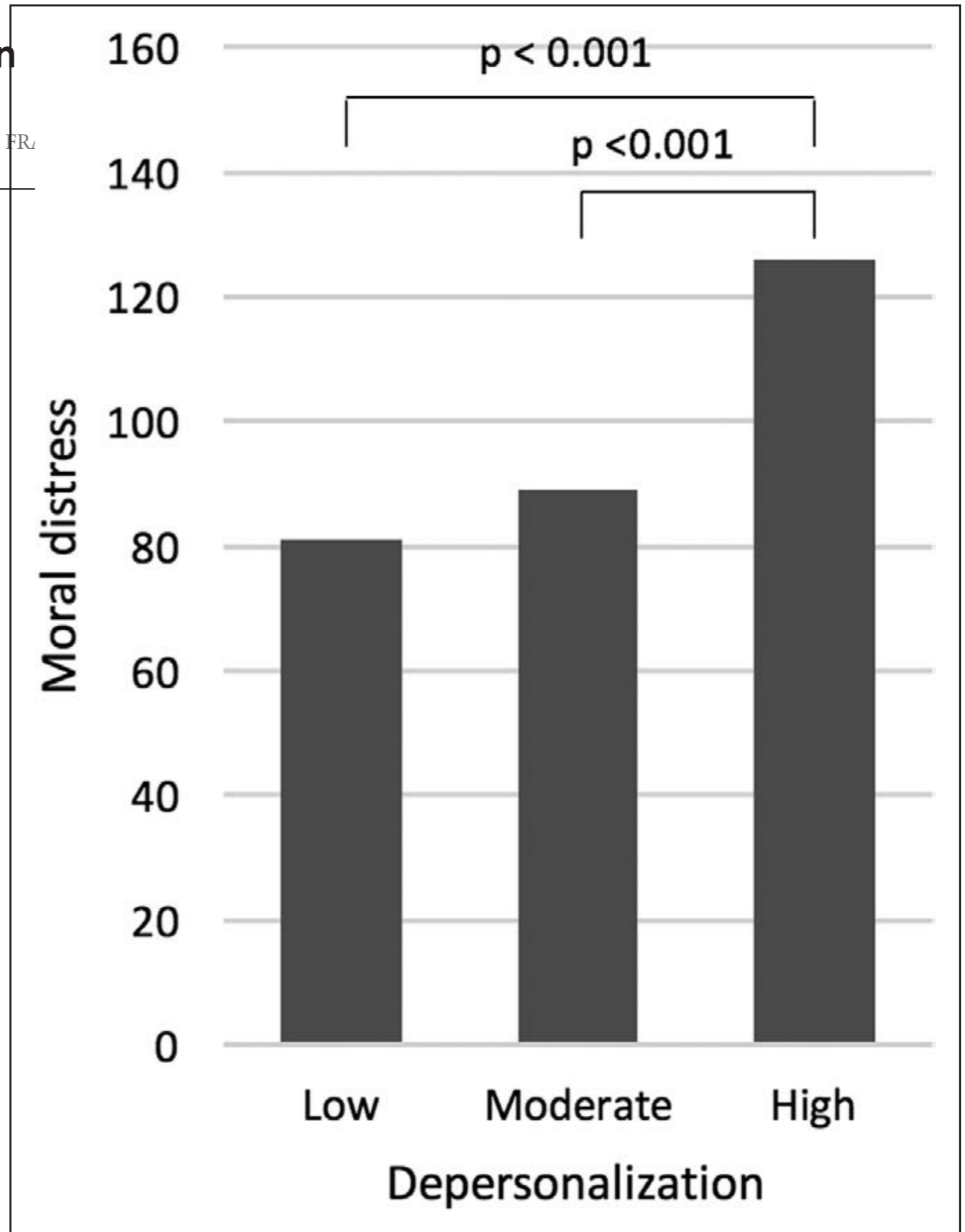
moral distress &
depersonalization

$r^2 = 0.27; p < 0.001$

apparent paradox?

mechanism ?

epiphenomenon?



structural interventions?

- 1 baseline issue - and conference rationale
- 2 understand the origins of the problem
- 3 schedule interventions limited effect....
larger scale studies needed :)
- 4 mitigate moral distress
- 5 individual mindfulness (trainees/ faculty)
- 6 professional self-respect
- 7 fatigue risk management (org. mindfulness)

personal | *professional*

crashes
circadian rhythm disrupt
sleep deprivation
physical symptoms
debt

work content
workload
environment/ culture

Individual
Effects

stressors
mitigation

sleep
family
positive relationships
vacation
hobbies

sleep
staff support
supervision
reward & recognition
fatigue risk management

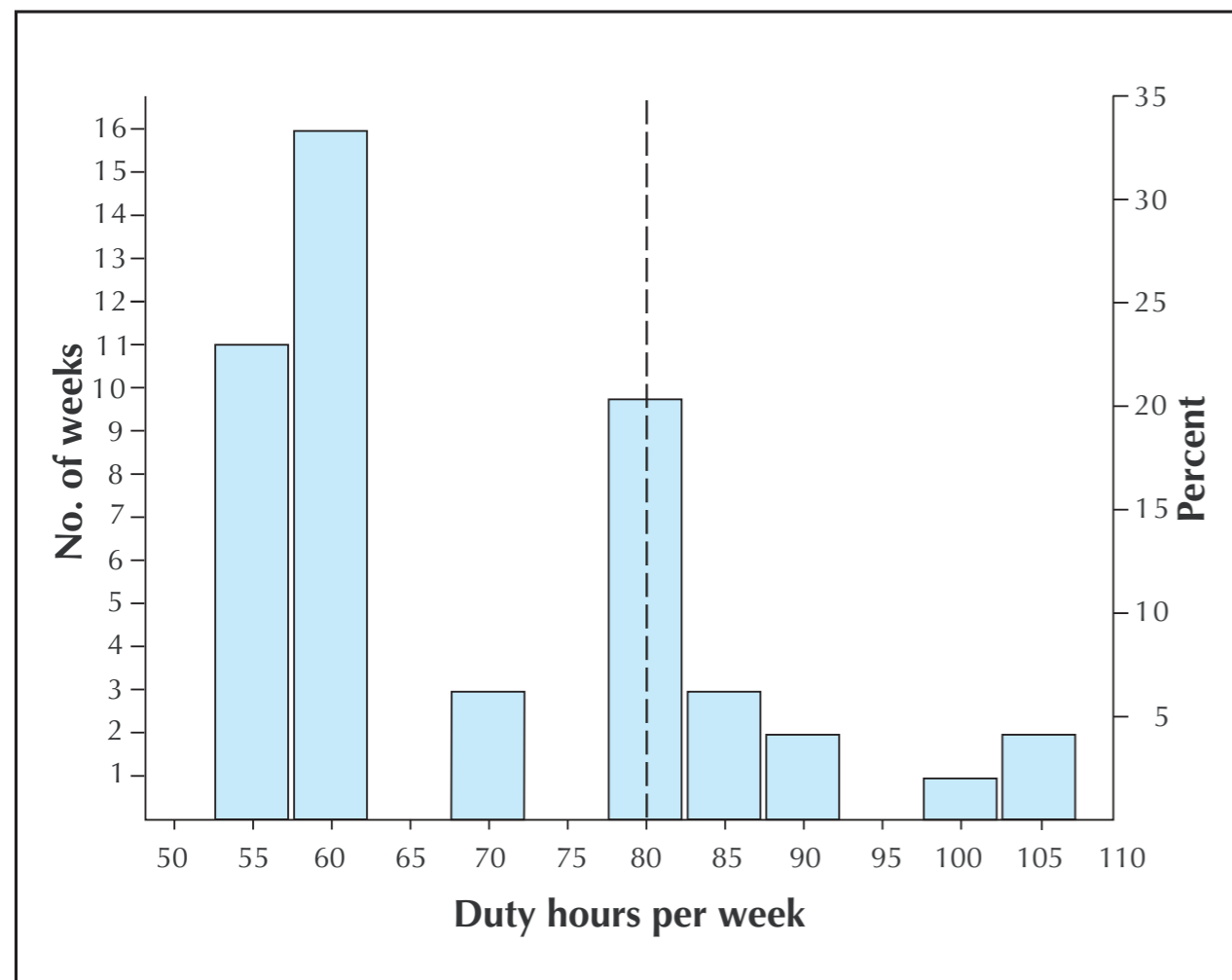
thank you

chris@sickkids.ca

Fellowship training, workload, fatigue and physical stress: a prospective observational study

Christopher S. Parshuram, Sonny Dhanani, Joel A. Kirsh, Peter N. Cox

† See related article page 975



|| ICU fellows

35 overnight duty periods = 24h

40 pages

no sleep 1 in 7 nights

most responsible in-house 8-9h

6.3km walked

ketonuria 1 in 5 mornings

half of 48 weeks 55-60h / week

> regulation does not protect