Division of work time and its effects on wellbeing of Finnish care workers in assisted living facilities with 24-hour assistance

Visa Väisänen

Sinervo, T., Ruotsalainen, S., Corneliusson, L., Pesonen, T. & Noro, A.

16/09/2022

Finnish Institute for Health and Welfare

Challenges of Finnish long-term care

- **Aging population:** Number of older people in long-term care is rising, and they are in worse condition

- **Shortage of care workforce:** Thousands of new nurses are needed in the next few years to fulfill growing care needs

- **Unappealing work:** Compensation issues and stressful work have led to industrial action and nurses leaving care work

- Much is known about how leadership, stress etc. affect wellbeing, but information on the role of workday characteristics and care needs is lacking

Work-time allocation project

- **Who:** Registered nurses and practical nurses
- **Where:** Finnish assisted living facilities with 24-hour assistance
- **Objectives:** To track the work time allocation of care workers
- Measure direct and indirect care time allocated to clients, and what this time consists of
- Finally, to update Resource Utilization Group (RUG18) classification system's Finnish cost weights
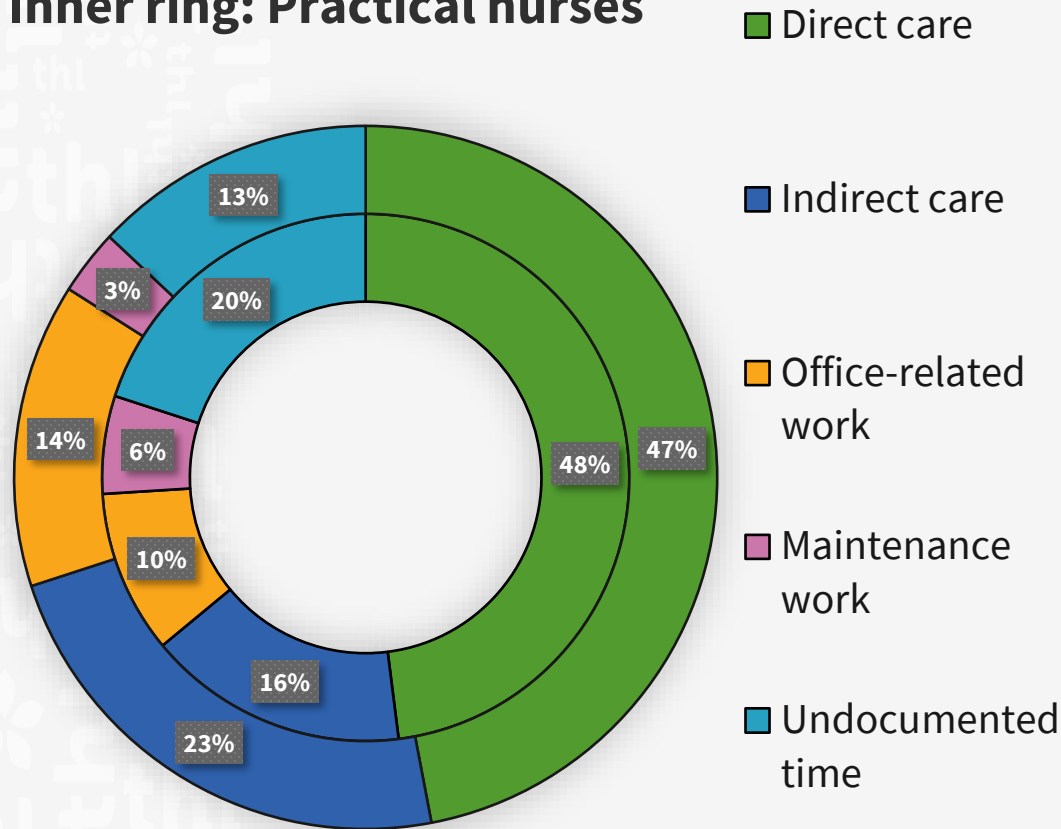
Methods 1/2

- 390 practical nurses and 62 registered nurses from 44 different Finnish care units took part in the study

- Paper forms were used to document work done per action for one day, with a special focus on care time spent with clients

- Work time was divided into 1) direct care time, 2) indirect care time, 3) office-related work, 4) maintenance work (cleaning/laundry/food preparation) and 5) break-time

Methods 2/2

- The care workers filled in an optional questionnaire before and after their workday, assessing sleep quality, recovery, daily work stress, time pressure and other wellbeing factors

- The care needs of the residents were retrieved from RAI-assessments (Resident Assessment Instrument)

- The effects of work time division, characteristics of the workday and other background variables on work stress and time pressure were analyzed using logistic regression

Work-time allocation 1/4

Outer ring: Registered nurses
Inner ring: Practical nurses

- Direct care
- Indirect care
- Office-related work
- Maintenance work
- Undocumented time

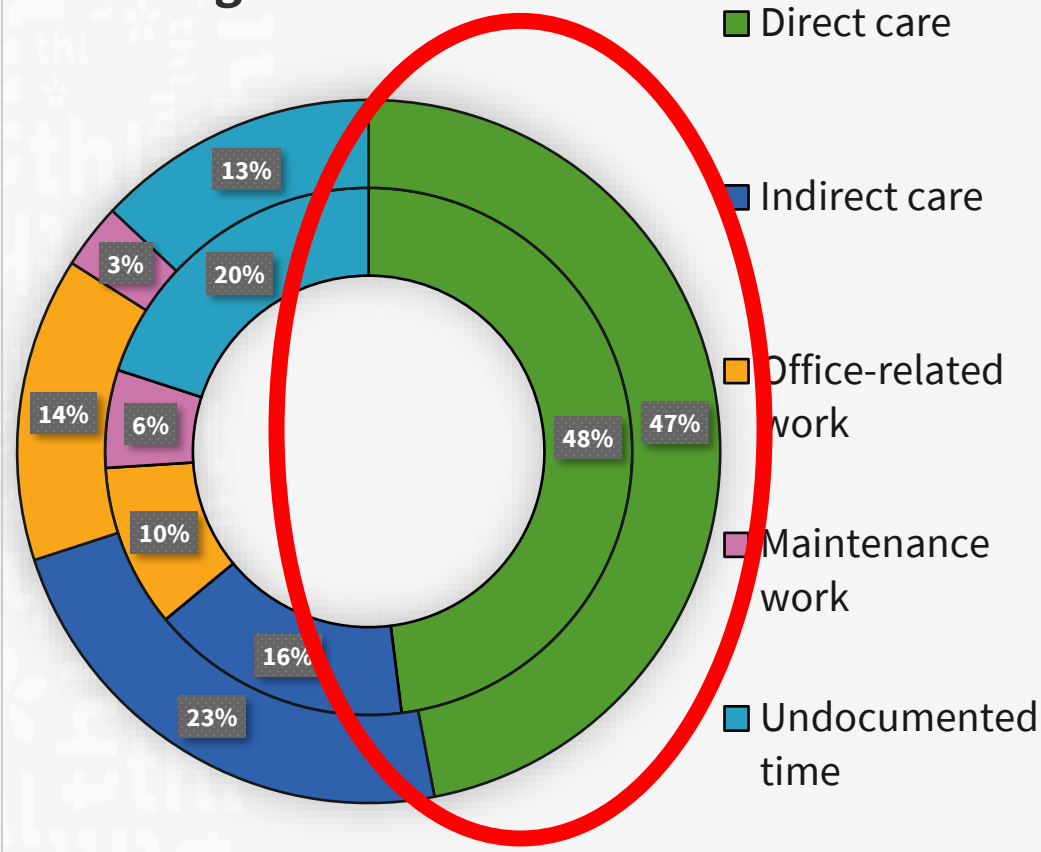Chart labels: 13%, 3%, 20%, 14%, 6%, 48%, 47%, 10%, 16%, 23%

Average work day was 7h 48min, excl. 27 mins of breaks

- Registered nurses had more indirect care and office-related work

- Practical nurses had less admin duties, but more maintenance work
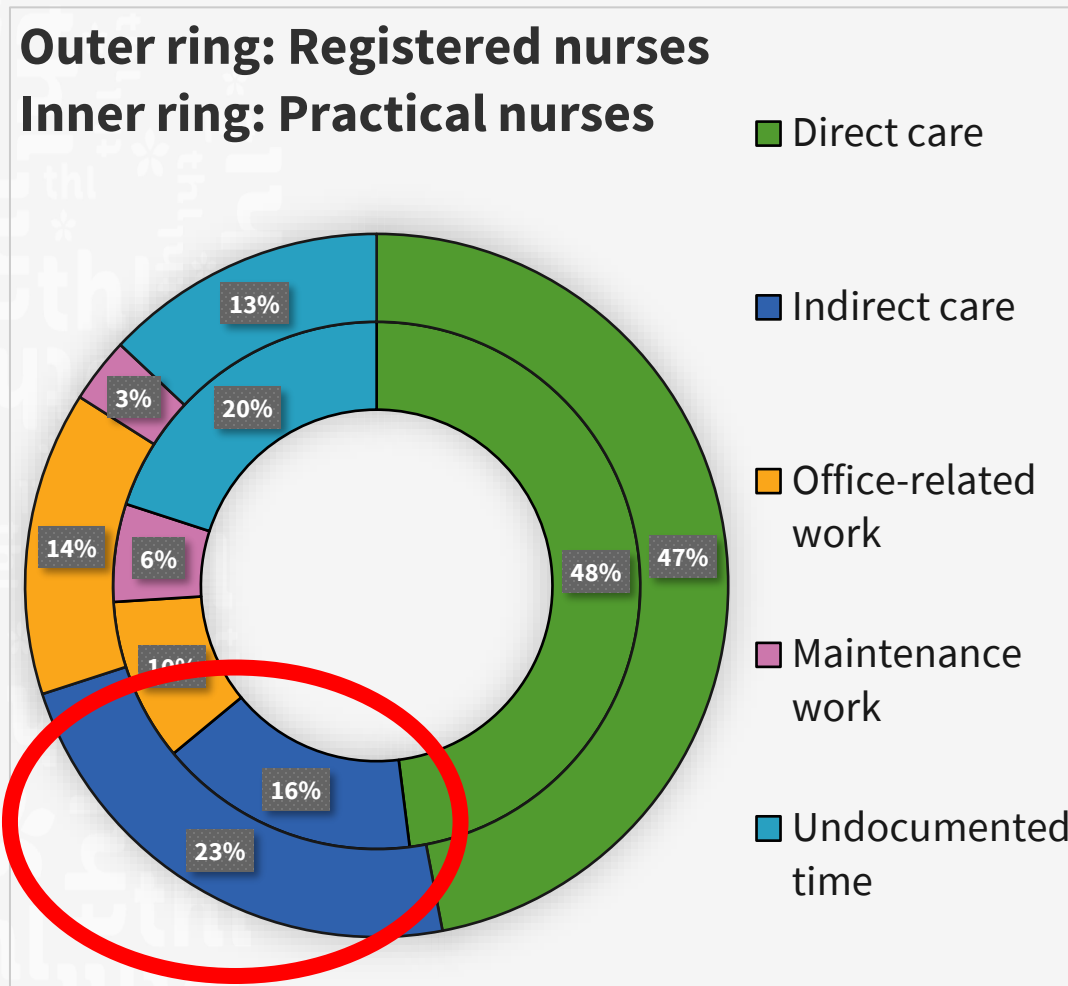
Work-time allocation 2/4

Outer ring: Registered nurses
Inner ring: Practical nurses

Legend:
- ■ Direct care
- ■ Indirect care
- ■ Office-related work
- ■ Maintenance work
- ■ Undocumented time

Chart values: 13%, 3%, 20%, 14%, 6%, 10%, 48%, 47%, 16%, 23%

- Direct care consisted mainly of activities related to daily living (70 %): hygiene, dressing up, eating, moving

- Registered nurses had more medical procedures and needs assessment than practical nurses

Work-time allocation 3/4

Outer ring: Registered nurses
Inner ring: Practical nurses

Legend:
- Direct care
- Indirect care
- Office-related work
- Maintenance work
- Undocumented time

Chart values: 13%, 3%, 20%, 14%, 6%, 10%, 16%, 23%, 48%, 47%

- Indirect care work mostly included filling nursing documentation and medicine management

- Registered nurses spent more time in the office doing administrative work related to patients

Work-time allocation 4/4

Outer ring: Registered nurses
Inner ring: Practical nurses

- Direct care
- Indirect care
- Office-related work
- Maintenance work
- Undocumented time

13%
3%
20%
14%
6%
48%
47%
10%
16%
23%
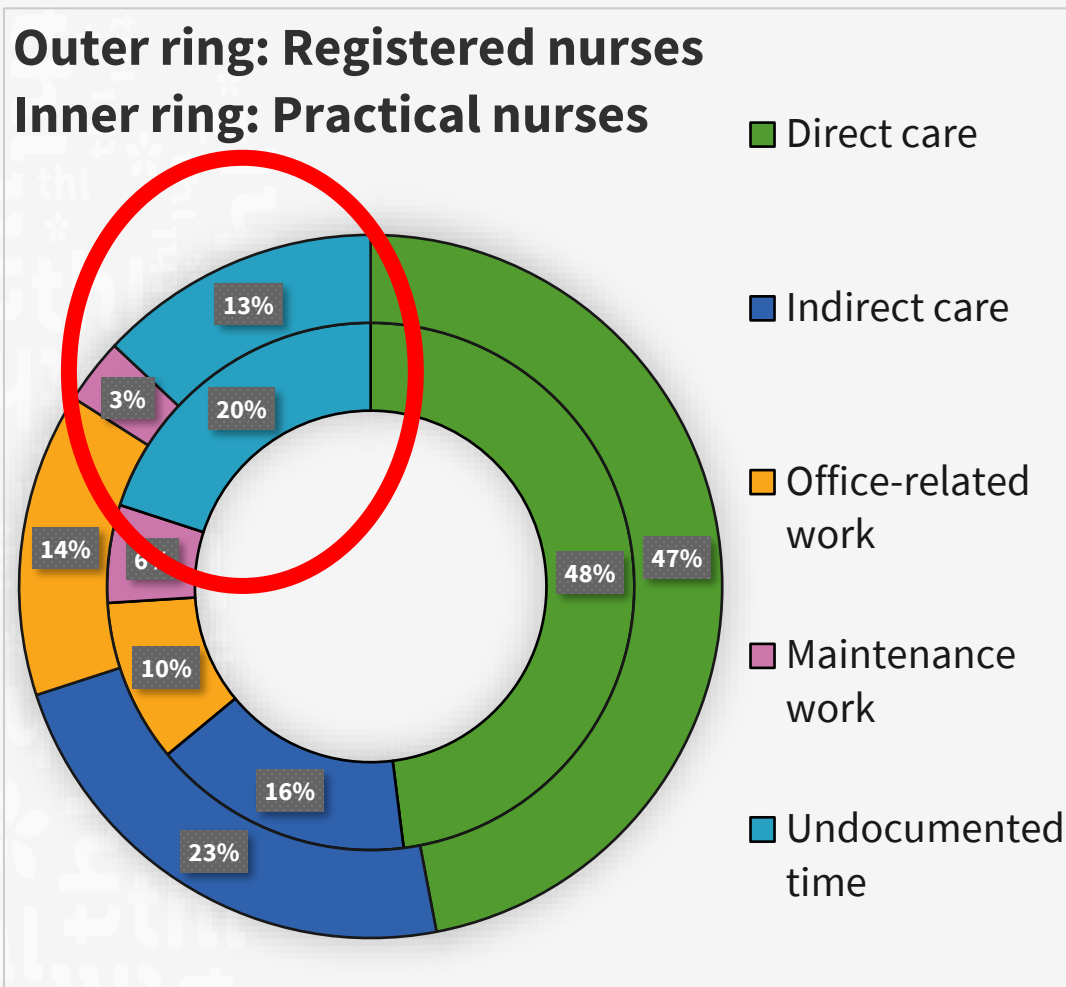
- Undocumented time was left over time that was not marked down on the data collection sheets

- Analysis of the time suggests: undocumented time consisted mostly of breaks and office-work

Logistic regression: Variables

- Questionnaire items on perceived daily stress and time pressure were recoded into binary variables, with 0 as less stress/time pressure and with 1 as more stress/time pressure

- Independent variables measured background information (such as age, sex), characteristics of the workday (number of residents and their care needs), and subjective measurement of whether the workday went as planned and recovery from strain

Model 1: Perceived <u>daily stress</u>

Variable	Odds Ratio	95% CI	p-value
Intercept	0.01	0.00-0.16	
Age	0.99	0.97-1.02	0.5083
Male sex (reference: female)	0.92	0.24-3.52	0.9064
Registered nurse (ref: practical nurse)	1.53	0.70-3.32	0.2830
Private care unit (ref: public)	1.53	0.80-2.93	0.1948
Proportion of direct care time during the day (%)	1.01	0.99-1.03	0.4366
Number of residents taken care of during the work day	**1.03**	**1.01-1.05**	**0.0049**
ADL_H mean of residents taken care of during the work day (Activities of Daily Living –indicator, 0-6)	**1.46**	**1.01-2.11**	**0.0440**
Amount of interruptions	**1.25**	**1.10-1.41**	**0.0005**
Workday went as planned (yes, no)	**3.42**	**2.24-5.22**	**<.0001**
Recovery from strain (1-5)	**0.74**	**0.65-0.85**	**<.0001**

- The model predicted perceived daily stress strongly (C-statistic: 0.82, pseudo R2 = 0.33)

Model 1: Perceived <u>daily stress</u>

Variable	Odds Ratio	95% CI	p-value
Intercept	0.01	0.00-0.16	
Age	0.99	0.97-1.02	0.5083
Male sex (reference: female)	0.92	0.24-3.52	0.9064
Registered nurse (ref: practical nurse)	1.53	0.70-3.32	0.2830
Private care unit (ref: public)	1.53	0.80-2.93	0.1948
Proportion of direct care time during the day (%)	1.01	0.99-1.03	0.4366
Number of residents taken care of during the work day	**1.03**	**1.01-1.05**	**0.0049**
ADL_H mean of residents taken care of during the work day (Activities of Daily Living –indicator, 0-6)	**1.46**	**1.01-2.11**	**0.0440**
Amount of interruptions	**1.25**	**1.10-1.41**	**0.0005**
Workday went as planned (yes, no)	**3.42**	**2.24-5.22**	**<.0001**
Recovery from strain (1-5)	**0.74**	**0.65-0.85**	**<.0001**

- Number of residents and their average care needs increased perceived daily stress

Model 1: Perceived <u>daily stress</u>

Variable	Odds Ratio	95% CI	p-value
Intercept	0.01	0.00-0.16	
Age	0.99	0.97-1.02	0.5083
Male sex (reference: female)	0.92	0.24-3.52	0.9064
Registered nurse (ref: practical nurse)	1.53	0.70-3.32	0.2830
Private care unit (ref: public)	1.53	0.80-2.93	0.1948
Proportion of direct care time during the day (%)	1.01	0.99-1.03	0.4366
Number of residents taken care of during the work day	1.03	1.01-1.05	0.0049
ADL_H mean of residents taken care of during the work day (Activities of Daily Living –indicator, 0-6)	1.46	1.01-2.11	0.0440
Amount of interruptions	1.25	1.10-1.41	0.0005
Workday went as planned (yes, no)	3.42	2.24-5.22	<.0001
Recovery from strain (1-5)	0.74	0.65-0.85	<.0001

- Interruptions and something going wrong during the day were strongly associated with more stress

Model 1: Perceived <u>daily stress</u>

Variable	Odds Ratio	95% CI	p-value
Intercept	0.01	0.00-0.16	
Age	0.99	0.97-1.02	0.5083
Male sex (reference: female)	0.92	0.24-3.52	0.9064
Registered nurse (ref: practical nurse)	1.53	0.70-3.32	0.2830
Private care unit (ref: public)	1.53	0.80-2.93	0.1948
Proportion of direct care time during the day (%)	1.01	0.99-1.03	0.4366
Number of residents taken care of during the work day	**1.03**	**1.01-1.05**	**0.0049**
ADL_H mean of residents taken care of during the work day (Activities of Daily Living –indicator, 0-6)	**1.46**	**1.01-2.11**	**0.0440**
Amount of interruptions	**1.25**	**1.10-1.41**	**0.0005**
Workday went as planned (yes, no)	**3.42**	**2.24-5.22**	**<.0001**
Recovery from strain (1-5)	**0.74**	**0.65-0.85**	**<.0001**

- Lastly, good recovery from strain (questionnaire item asked before the workday) reduced stress

Model 2: Perceived <u>time pressure</u>

Variable	Odds Ratio	95% CI	p-value
Intercept	0.01	0.00-0.11	
Age	1.03	1.00-1.05	0.0162
Male sex (reference: female)	0.99	0.33-2.96	0.9794
Registered nurse (ref: practical nurse)	0.80	0.39-1.62	0.5333
Private care unit (ref: public)	*1.70*	*0.98-2.96*	*0.0583*
Proportion of break-time during the day (%)	0.92	0.85-0.99	0.0330
Number of residents taken care of during the work day	1.02	1.00-1.04	0.0281
ADL_H mean of residents taken care of during the work day (Activities of Daily Living –indicator, 0-6)	1.43	1.06-1.94	0.0207
Amount of interruptions	1.16	1.04-1.30	0.0085
Workday went as planned (yes, no)	2.03	1.45-2.86	<.0001
Recovery from strain (1-5)	0.90	0.81-1.00	0.0416

- The model predicted perceived time pressure well (C-statistic: 0.72, pseudo R2 = 0.19)

Model 2: Perceived <u>time pressure</u>

Variable	Odds Ratio	95% CI	p-value
Intercept	0.01	0.00-0.11	
Age	**1.03**	1.00-1.05	0.0162
Male sex (reference: female)	0.99	0.33-2.96	0.9794
Registered nurse (ref: practical nurse)	0.80	0.39-1.62	0.5333
Private care unit (ref: public)	*1.70*	*0.98-2.96*	*0.0583*
Proportion of break-time during the day (%)	0.92	0.85-0.99	0.0330
Number of residents taken care of during the work day	1.02	1.00-1.04	0.0281
ADL_H mean of residents taken care of during the work day (Activities of Daily Living –indicator, 0-6)	1.43	1.06-1.94	0.0207
Amount of interruptions	1.16	1.04-1.30	0.0085
Workday went as planned (yes, no)	2.03	1.45-2.86	<.0001
Recovery from strain (1-5)	0.90	0.81-1.00	0.0416

- Firstly, older workers felt more time pressure, perhaps due to increased responsibilities

Model 2: Perceived <u>time pressure</u>

Variable	Odds Ratio	95% CI	p-value
Intercept	0.01	0.00-0.11	
Age	1.03	1.00-1.05	0.0162
Male sex (reference: female)	0.99	0.33-2.96	0.9794
Registered nurse (ref: practical nurse)	0.80	0.39-1.62	0.5333
Private care unit (ref: public)	*1.70*	*0.98-2.96*	*0.0583*
Proportion of break-time during the day (%)	0.92	0.85-0.99	0.0330
Number of residents taken care of during the work day	1.02	1.00-1.04	0.0281
ADL_H mean of residents taken care of during the work day (Activities of Daily Living –indicator, 0-6)	1.43	1.06-1.94	0.0207
Amount of interruptions	1.16	1.04-1.30	0.0085
Workday went as planned (yes, no)	2.03	1.45-2.86	<.0001
Recovery from strain (1-5)	0.90	0.81-1.00	0.0416

- More research is needed on whether nurses in private care units perceive increased time pressure

Model 2: Perceived <u>time pressure</u>

Variable	Odds Ratio	95% CI	p-value
Intercept	0.01	0.00-0.11	
Age	1.03	1.00-1.05	0.0162
Male sex (reference: female)	0.99	0.33-2.96	0.9794
Registered nurse (ref: practical nurse)	0.80	0.39-1.62	0.5333
Private care unit (ref: public)	*1.70*	*0.98-2.96*	*0.0583*
Proportion of break-time during the day (%)	0.92	0.85-0.99	0.0330
Number of residents taken care of during the work day	1.02	1.00-1.04	0.0281
ADL_H mean of residents taken care of during the work day (Activities of Daily Living –indicator, 0-6)	1.43	1.06-1.94	0.0207
Amount of interruptions	1.16	1.04-1.30	0.0085
Workday went as planned (yes, no)	2.03	1.45-2.86	<.0001
Recovery from strain (1-5)	0.90	0.81-1.00	0.0416

- More breaktime, fewer residents and their lower care needs logically reduced perceived time pressure

Variable	Odds Ratio	95% CI	p-value
Intercept	0.01	0.00-0.11	
Age	**1.03**	**1.00-1.05**	**0.0162**
Male sex (reference: female)	0.99	0.33-2.96	0.9794
Registered nurse (ref: practical nurse)	0.80	0.39-1.62	0.5333
Private care unit (ref: public)	*1.70*	*0.98-2.96*	*0.0583*
Proportion of break-time during the day (%)	**0.92**	**0.85-0.99**	**0.0330**
Number of residents taken care of during the work day	**1.02**	**1.00-1.04**	**0.0281**
ADL_H mean of residents taken care of during the work day (Activities of Daily Living –indicator, 0-6)	**1.43**	**1.06-1.94**	**0.0207**
Amount of interruptions	**1.16**	**1.04-1.30**	**0.0085**
Workday went as planned (yes, no)	**2.03**	**1.45-2.86**	**<.0001**
Recovery from strain (1-5)	**0.90**	**0.81-1.00**	**0.0416**

- Lastly, similarly to stress, interruptions, workday went as planned, and recovery were strongly associated with **perceived time pressure**

Conclusions

- The results indicate that sufficient staffing, in addition to ensuring enough break-time and recovery between shifts, affect perceived daily stress and time pressure of care workers

- Proper balance of staffing level and care needs of the residents can lead to better working conditions

- More focused care without interruptions can help reduce daily stress and time pressure

- **Finnish care work in crisis:** Better working conditions = happier nurses, which leads to higher workforce retention and appeal in care work?

What's next? 1/2

- **Staffing level:** 2020 law set a rigid number in Finland, 0.6 nurses per resident (rising to 0.7 in 2023)

- Every tenth care unit currently not able to reach the staffing level of 0.6 nurses per resident

- Two very different care units (with same number of residents) must have the same staffing level, although the other one could have much higher average care needs

- More staff is good, but care needs not specifically accounted for. Risk factor for increased stress and time pressure for care workers

What's next? 2/2

- **Working conditions:** Smaller teams, better leadership etc. have been on the agenda for decades, but efficiency and work optimization seem to have mostly overrun these efforts

- Piloting and implementing new care and organizational models is needed, to help revitalize care work in Finland. Not just for efficiency!

- **End goals:** Many more care workers needed, with care focused better via measured care needs. Improvements in working conditions, to keep current workforce in care work (happily)

Thank you for your interest!

Any questions or thoughts?