Application of Revised Nursing Work Index and the Maslach Burnout Inventory for Registered Nurses from Public Health Institutions, São Paulo, Brazil

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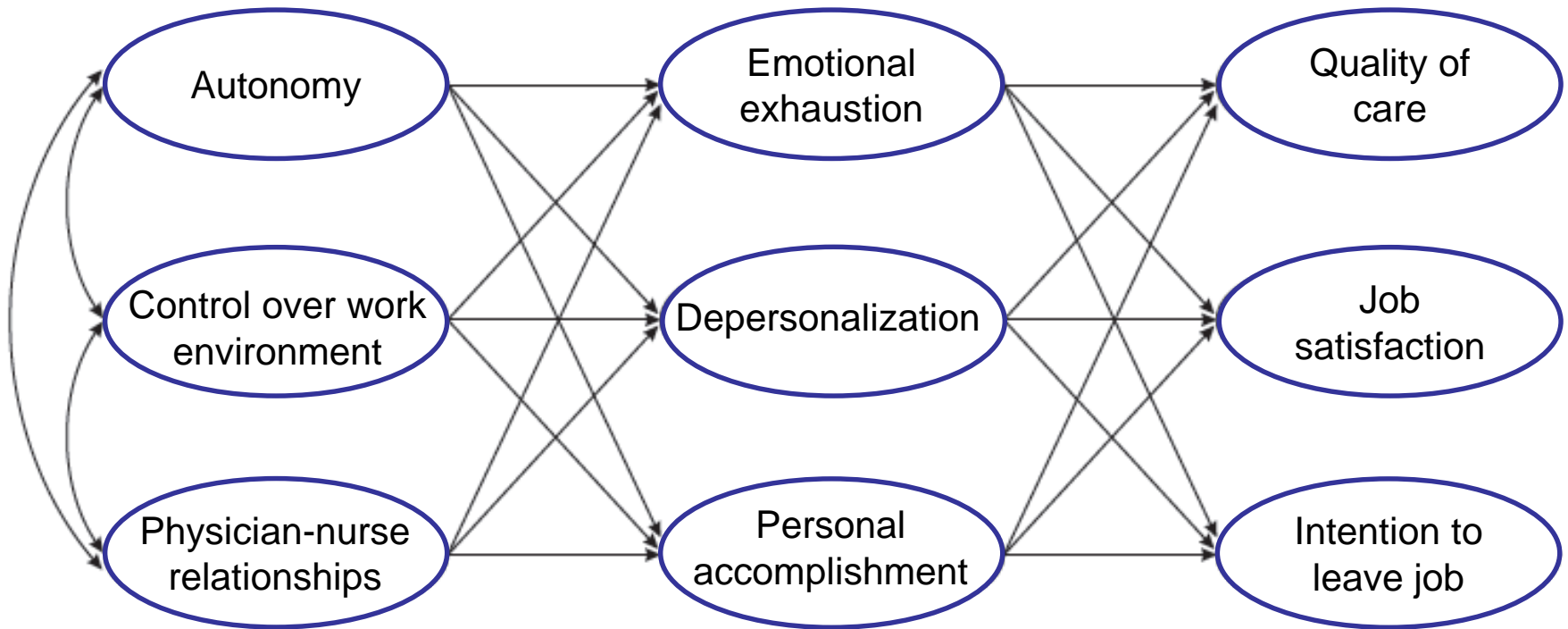Ruth Natalia Teresa Turrini - PhD, RN
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Introduction

Professional practice environment — Burnout — Outcome variables

Autonomy

Control over work environment

Physician-nurse relationships

Emotional exhaustion

Depersonalization

Personal accomplishment

Quality of care

Job satisfaction

Intention to leave job

Casual model of the professional nursing practice environment and outcome variables

Panunto; Guirardello, 2013

Bogaert et al, 2009

Aim

To verify the relationship between the results of the Revised Nursing Work Index (NWI-R) and the Maslach Burnout Inventory (MBI)

Methods

- Descriptive, exploratory, cross-sectional study

- Data collection: January 2011 - January 2012

- São Paulo, Brazil

- 40 public health institutions
  - 23 general hospitals
  - 11 psychiatric institutions
  - 06 specialized clinics

Methods

- Ethics Committee of School of Nursing – University of São Paulo

- Two questionnaires were applied for nurses (worked or responsible for units with patients)
  - Revised Nursing Work Index (NWI–R)
  - Maslach Burnout Inventory (MBI)

Revised Nursing Work Index

- Measure the practice environment

- 57 items (Likert – 1 to 4)

- Low scores – favorable attributes of the nursing practice

- Four subscales:

  - Autonomy

  - Control over the practice setting

  - Nurse/physician relations

  - Organizational support

Aiken; Patrician, 2000

Maslach Burnout Inventory

- Measure the physical and emotional exhaustion of workers

- 22 items (Five categories – Brazilian version: never, rarely, sometimes, often and always)

- Three subscales:

  – Emotional exhaustion

  – Depersonalization

  – Personal accomplishment

Maslach, Jackson; 1981/1986

Tamayo; 1997

Methods

- Tests (significance level ≤ 5%)
  - Pearson Correlation
    - 1.0 – Perfect correlation
    - 0.99 – 0.6 – Strong correlation
    - 0.59 – 0.3 – Moderate correlation
    - < 0.3 – Weak correlation
  - Cronbach's alpha coefficient
  - Cluster Analysis
  - Analysis of Variance (ANOVA)
  - Bonferroni test

Results

Characteristics of nurses (n=745)

- Average age – 43 years (± 9.6)
- Average working time – 14 years (± 8.5)
- Average working time at current institutions – 9 years (± 9.4)

Results

Table 1. Reliability of the NWI-R (total and subscales) and MBI (total and subscales). São Paulo, Brazil – 2010-2011

Instruments	Cronbach's alpha
NWI – R	
Total score	0.962
Autonomy	0.695
Control over the practice setting	0.794
Nurse–physician relations	0.773
Organizational support	0.815
MBI	
Total score	0.602
Emotional exhaustion	0.877
Depersonalization	0.549
Personal accomplishment	0.723

Results

Table 2. NWI-R (total and subscales) and MBI (total and subscales) correlations. São Paulo, Brazil – 2010-2011

MBI	NWI - R				
	Total score	Autonomy	Control over the practice setting	Nurse–physician relations	Organizational support
Total score	0.26	0.25	0.24	0.19	0.21
Emotional exhaustion	**0.46***	**0.46***	**0.39***	0.24	**0.40***
Depersonalization	0.28	**0.33***	0.19	0.13	0.27
Reduced personal accomplishment	**- 0.41***	**- 0.44***	- 0.26	- 0.11	**- 0.40***

Pearson' correlation coefficient
*p < 0.005

Results

Table 3. Health institutions distribution according to NWI-R homogeneous groups. São Paulo, Brazil – 2010-2011

Groups*	N	%
1	13	32.5
2	16	40.0
3	3	7.5
4	8	20.0

*Cluster analysis

- ✓ Group 1 – Highest values of subscale nurse–physician relations
- ✓ Group 3 – Highest scores on subscales autonomy, control over the practice setting ,and organizational support
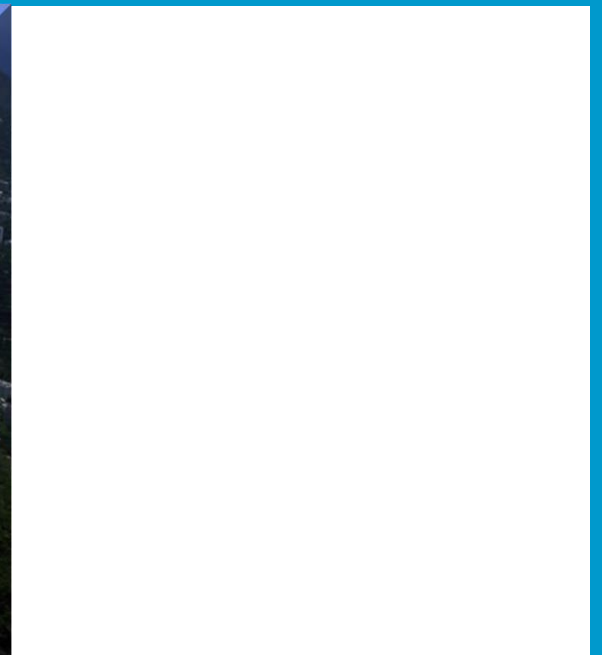- ✓ Group 4 – Lowest scores on all subscales

Results

Table 4. Comparison of MBI results (total and subscales) between homogeneous groups of institutions according to NWI-R. São Paulo, Brazil - 2010-2011

		NWI - R				p*
		Group 1	Group 2	Group 3	Group 4	
MBI - total	Average	62.70	62.70	65.78	62.48	0.315
	SD	3.96	1.54	2.42	2.20	
Emotional exhaustion	Average	22.41	22.41	25.38	21.15	**0.035**
	SD	2,88	1,53	0,63	1,35	
Depersonalization	Average	8.75	8.45	10.20	8.95	**0.028**
	SD	0.90	0.95	0.75	0.80	
Reduced personal accomplishment	Average	31.68	31.84	30.32	32.40	0.154
	SD	1.04	1.60	1.68	1.12	

Conclusion

The group of public hospitals in São Paulo (Brazil) with the best nursing practice showed significant statistical difference for emotional exhaustion and depersonalization domains compared to groups of hospitals with less favorable characteristics

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