25th EPICOH
Epidemiology in Occupational Health Conference
Barcelona - Spain
September 5-7, 2016
Occupational Health:
Think Globally, Act Locally
Universitat Pompeu Fabra, Campus de la Ciutadella

INT-SO Project: Stress Among Nurses

Elisabete Borges[1], Margarida Abreu[1], Cristina Queirós[2], Pilar Mosteiro[3], Patrícia Baptista[4] & Vanda Felli[4]

1.ESEP, Porto, Portugal   2.FPCEUP, Porto, Portugal   3.FMCS-Univ. Oviedo, Spain   4.EE-Univ.S. Paulo, Brasil

1. Background

Healthy workplaces campaign from EU-OSHA (2014) refers that job stress occurs when job demands exceed worker's ability to react, being stress one of the most serious consequences of a negative working environment. Nurses are exposed to several job stressors that can adversely affect their mental/physical health. Studies showed that nurses present a higher risk than other professionals to develop emotional distress elicited by job tasks (Borges & Ferreira, 2015). In the current social and economic context, job tasks assume a fundamental role in individual' life. Portugal, Brazil and Spain share (due historical background, geographical proximity, cultural or language), many features, with regular flows of workers exchanges in various professions, enabling cross-cultural comparative studies that allow to identify common standards despite specifics of each country.

2. Aims

To describe the international project INT-SO and to present preliminary results of stress among nurses on Portuguese context.

3. Method

A cross-sectional study was developed on Portugal, Brazil and Spain (included in the INT-SO project, an international study about occupational health of nursing professionals). Portuguese version of Nursing Stress Scale (NSS) (Gray-Troft & Andreson, 1991; Santos, 2010) and a demographic questionnaire were applied anonymously to 290 nurses, being 72% female, 63% working by shifts and 72% in hospitals. Mean age was 35.4 years and mean job experience was 11.9 years.

The NSS consists of 34 items that report situations causing stress in nurses. The items are assessed on a Likert type scale (between 0 - never to 3 - very often), measuring the frequency of professional situations perceived by nurses as stressful. The items are organized on 7 stress factors related to three types of environment (Table 1).

4. Results

Results revealed moderate stress level, considering dimensions of NSS (Table 1). Work overload was the most stressful dimension, followed by deal with death and dying dimension, and uncertainty regarding the treatments dimension. Conflict with nurses, and lack of support were both the dimensions perceived as least stressful. Globally, physical environment was most stressful while social and psychological environment were lest stressful. Some significant differences were found, varying according civil state, job contract, shifts and workplace (Table 2).

Table 2. Comparative analysis on the basis of civil state, contract of employment, shift and workplace

Dimensions	Civil State		t (p)	Contract of employment		t (p)	Shift		t (p)	Workplace		t (p)
	Without partner n=138	With partner n=152		Permanent n=210	Precarious n=76		Fixed n=101	Rotating n=184		Hospital n=209	Primary Health Care n=81	
Death and dying										1.43 (.52)	1.25 (.47)	2.705 (.007)
Conflict with physicians	1.17 (.46)	1.04 (.43)	2.557 (.011)				1.00 (.41)	1.16 (.46)	-3.020 (,003)	1.16 (.46)	.95 (.39)	3.563 (.000)
Inadequate preparation				1.16 (0.52)	1.01 (.48)	2.182 (.030)				1.15 (.54)	1.05 (.42)	2.937 (.004)
Conflit with other nurses	1.08 (.62)	.92 (.47)	2.415 (.016)	1.06 (.56)	.83 (.50)	3.114 (.002)						
Work load Physical environment				1.74 (.58)	1.50 (.54)	3.168 (.002)				1.73 (0.61)	1.53 (0.46)	2.583 .010
Uncertainty regarding treatment	1.29 (.53)	1.11 (.45)	2.981 (.003)							1.27 (.52)	1.01 (.37)	4.010 (.000)
Psychological environment				1.23 (.42)	1.10 (.45)	2.292 (.023)				1.23 (.46)	1.10 (.32)	2.391 (.017)
Social environment	1.13 (.46)	.98 (.39)	2.873 (.004)	1.10 (.43)	.93 (.42)	2.964 (.003)				1.11 (.45)	.90 (.33)	3.34 (.000)

Table 1. Means, Standard deviations and inter-correlations of age, job experience and NSS dimensions

NSS (0-3 scale)	M	SD	1	2	3	4	5	6	7	8	9	10
1. Age	35.4	8.2										
2. Job experience	11.9	8.0	.952**									
3. Death and dying	1.38	.51	-.149*	-.168**								
4. Conflict with physicians	1.10	.45	-.178**	-.181**	.485**							
5. Inadequate preparation	1.12	.51	.059	-.132*	.589**	.464**						
6. Lacke of support	1.07	.64	.066	.013	.390**	.399**	.489**					
7. Conflit with other nurses	1.00	.55	-.079	-.119*	.387**	.495**	.447**	.437**				
8. Work load = Physical environment	1.67	.58	-.175**	-.200*	.490**	.454**	.500**	.434**	.473**			
9. Uncertainty regarding treatment	1.20	.49	-.101	-.159**	.571**	.595**	.622**	.437**	.504**	.574**		
10. Psychological environment	1.19	.43	-.067	-.130*	.786**	.600**	.835**	.762**	.559**	.624**	.812**	
11. Social environment	1.05	.43	-.144*	-.169**	.498**	.835**	.523**	.484**	.892**	.535**	.627**	.666**

*p<.050   **p<.010

5. Conclusions

Results supports other studies (EU-OSHA, 2014; Borges & Ferreira, 2015; Kamisa et al., 2015) and INT-SO project tries to contribute to healthy workplaces, understanding nursing stress factors, expected to be the same on Portugal, Spain and Brasil, since nurses as caregivers seems to cope with same job demands. Moreover they alert to for effective management of psychosocial risks, particularly through the implementation of management programs of work-related stress.

References

- Borges, E. & Ferreira, T. (2015). Bullying no trabalho: Adaptação do Negative Acts Questionnaire-Revised (NAQ-R) em enfermeiros. *Revista Portuguesa de Enfermagem de Saúde Mental , 13*, 25 - 33.
- Gray-Toft, P. & Anderson, J. (1981). The Nursing Stress Scale: Development of an Instrument. *Journal of Behavioral Assessment, 3(1)*, 11-23.
- Lee, N. (2016). Workplace health needs assessment proposal: case study. *Occupational Health, 68(3)*, 19-21.
- Khamisa, N., Oldenburg, B., Peltzer, K.& Ilic, D. (2015). Work Related Stress, Burnout, Job Satisfaction and General Health of Nurses. *Int. J. Environ. Res. Public Health, 12*, 652-666.
- OSHA, European Agency for Safety and Health at Work (2014). *Calculating the cost of work-related stress and psychosocial* . Bilbao: Spain
- PHE, Public Health England (2016). *Interventions to prevent burnout in high risk individuals: evidence review*. Leeds: Leeds Beckett University.
- Santos, J.M.O. (2010). *Stresse Profissional. Consumo de Bebidas Alcoólicas. Estudos numa Amostra de Enfermeiros*. Tese de Doutoramento em Ciências Sociais. Porto: Universidade de Fernando Pessoa.
- Woodhead, E.L., Northrop, L. & Edelstein, B. (2016). Stress, social support, and burnout among long-term care nursing staff. *Journal Of Applied Gerontology, 35(1)*, 84-105.

There are no conflicts of interests for any authors   elizabete@esenf.pt