

Effects of Hazardous Work Conditions on Burnout Among Nurses of a General Hospital in Macau

1st August 2012

Sydney X. Hu, PhD¹

Andrew Luk, PhD¹

Grace K. I. Lok, MN¹

Jui-Kuo Hsiao, MA²

(1)The Kiang Wu Nursing College of Macau, Macau, Macau

(2)Center for General Education, Kang-Ning Junior College of
Medical Care and Management, Taiwan, Taiwan

Objectives of the study

Burnout is affected by workplace risks and hazards across industries.

The purpose of the study is to use Structural Equation Modeling to test the effects of workplace hazards on burnout of nurses in a general hospital in Macau.

The findings provide practical and research implications for better management of work conditions and burnout among nurses.

Definitions

Work hazards- the physical, chemical, biological, ergonomic work environments and harassments that might be harmful to the health of nurses

Burnout – loses all concerns and feelings toward one works with (Maslach, 1976)

Method

1. A cross-sectional questionnaire survey of all nurses in one Macau hospital on voluntary base with anonymity
2. Questionnaires distributed by ward unit managers and collected by research assistants in person
3. Workplace hazards were assessed using a set of self developed questions.
4. Burnout was assessed using the Maslach Burnout Inventory.
5. Exploratory factor analyses were used to identify factors in scales. Structural Equation Modeling was used to test the relationship between workplace hazards and burnout.

Results: Demographics (N=424)

		Number	Percentage
Gender N=421	Male	17	4
	Female	404	96
Marital status N=420	Single	191	45
	Married/separated	229	55
Age N=423	<or =25	119	28
	25-30	96	23
	31-35	111	26
	36-40	40	9
	=>41	57	13

Results: Demographics

		Number	Percentage
Education	Diploma	62	15
N=419	Undergraduate	349	83
	Postgraduate	8	2
Prof. grade	Level 3	205	49
N=421	Level 2	74	18
	Level 1	90	18
	NUM or above	52	12
Job status	Permanent	315	76
N=412	Contract	97	24

Results- Workplace Hazards Factor Analysis

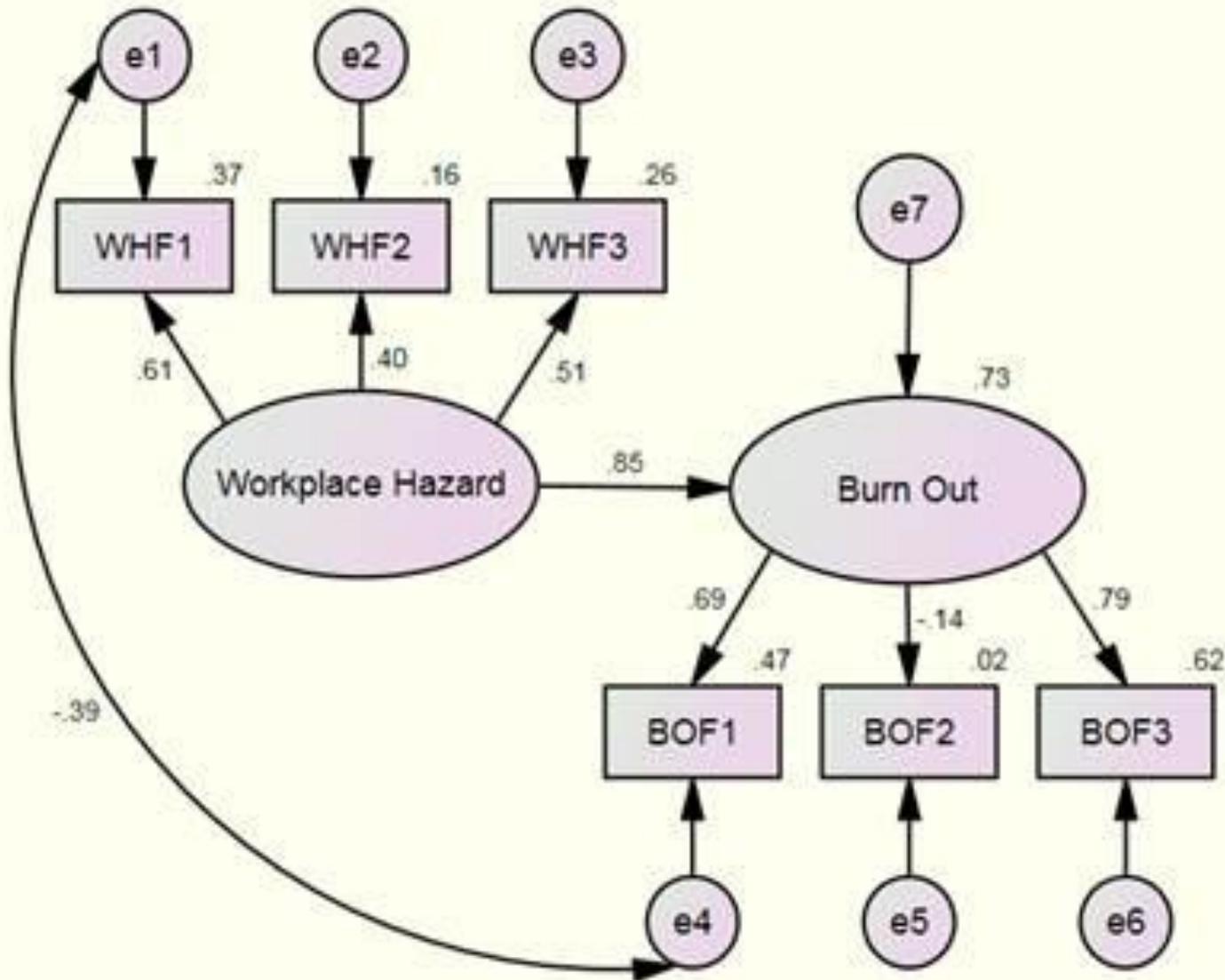
	Component		
	WHF1 ($\alpha = 0.81$)	WHF2 ($\alpha = 0.70$)	WHF3 ($\alpha = 0.52$)
1 Work involve Repetitive hand or arm movements	.747		
2 Work involve Handling or being in direct contact with materials which can be infectious, such as waste, bodily fluids etc	.733		
3 Work involve Tiring or painful positions	.726		
4 Work involve Standing or walking	.719		
5 Work involve Carrying or moving heavy loads	.670		
6 Work involve Handling or being in skin contact with chemical products or substances	.631		
7 Over the past 12 months, personally been subjected at work to threats of bullying / harassment		.823	
8 Over the past 12 months, personally been subjected at work to threats of discriminations		.723	
9 Over the past 12 months, personally been subjected at work to threats of unwanted sexual attention		.714	
10 Over the past 12 months, personally been subjected at work to threats of physical violence		.636	
11 Being exposed at work to too high or too low temperatures			.745
12 Being exposed at work to Breathing in smoke or fumes			.692
13 Being exposed at work to Noise so loud that you would have to raise your voice to talk to people			.586

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

Results: Burn Out Factor Analysis

	Component		
	BOF1 ($\alpha = 0.88$)	BOF2 ($\alpha = 0.75$)	BOF3 ($\alpha = 0.84$)
1 I've become more callous towards people since I took this job	.775		
2 I worry that this job is hardening me emotionally.	.765		
3 I feel frustrated by my work.	.754		
4 I don't really care what happens to some patients	.736		
5 Working with people directly puts too much stress on me.	.708		
6 I feel I treat some patients as if they were impersonal objects	.703		
7 Working with people all day is really a strain for me.	.683		
8 I feel like I am at the end of my rope.	.648		
9 I feel recipients blame me for some of their problems.	.517		
10 I feel exhilarated after working closely with my recipients.		.772	
11 I can easily create a relaxed atmosphere with my recipients.		.722	
12 I have accomplished many worthwhile things in this job.		.658	
13 I feel I'm positively influencing other people's lives through my work		.597	
14 I feel very energetic.		.563	
15 In my work, I deal with emotional problems very calmly.		.560	
16 I deal very effectively with the problems of my recipients.		.509	
17 Working with people all day is really a strain for me			.821
18 I feel I am working too hard on my job.			.754
19 I feel fatigued when I get up in the morning and have to face another day on the job			.737

Results: Structural Equation Model



Conclusions

- Workplace hazards have an adverse effect on burnout of nurses in the general hospital.
- Not only biological threats but also the polluted physical environments and psychosocial harassments have significant effects on the depersonalization and emotional exhaustions of nurses.