



Perceived Risk of Violence in Various Hospital Levels and Departments in Urban and Rural China

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Dear Editor-in-Chief

Workplace violence has serious consequences for the involved medical workers and the entire health care system (1). It can result in a variety of adverse effects on medical professionals, such as anger, fear, depression, anxiety, job dissatisfaction and demission (2) Research reported that half of abused nurses considered leaving the profession (3). In China, workplace violence against medical workers is more common and serious, especially in recent years (4). A study of 12 hospitals revealed that the incidence of verbal abuse and threats to health professionals was 96% in 2009, and the incidence of physical injuries was 63.7% in 2012 (5). However, the majority of studies were designed to assess the incidence of violence among doctors or nurses who experienced workplace violence. Research on the perception level of risk of violence is rare.

The aim of this study was to explore the level of perceived risk of violence in hospitals and the departmental distribution across various levels of hospitals. A cross-sectional survey was conducted between Jun and Jul 2011 in Liaoning Province, which is in northeastern China and comprises three cities and three counties. It concluded 3292 registered health professionals. The survey was answered on a 5-point Likert scale from 1 to 5: 1) never, 2) rarely, 3) sometimes, 4) frequently, and

5) always. The average test-retest reliability of the scale was sufficient.

The average score of perceived occupational risk of violence was 3.16 ± 1.31 for all health professionals, 3.05 ± 1.34 for doctors and 3.29 ± 1.25 for nurses. Nurses reported a significantly higher score than doctors ($P < 0.05$). The distribution of the perception of risk of violence across various hospital levels and departments is shown in Table 1. Those who worked in urban and tertiary hospitals perceived a higher risk of violence. Overall, those who worked in emergency departments perceived the highest risk of violence, but doctors who worked in ICU departments had the highest perceived risk of violence, and nurses who worked in pediatrics perceived a higher risk of violence than those who worked in departments other than the emergency department. Comparisons of demographic and practice-related factors across the level of medical workers' perceived risk of violence are shown in Table 2. Males perceived a higher level of risk of violence than females. Those with higher education perceived a higher risk of violence. Medical workers who worked longer hours were more likely to perceive a risk of violence. Those with a lower professional position perceived a higher risk. Age showed an inverse correlation with perceived risk of violence. Our study indicated that

male doctors were more likely to perceive a risk of violence than female doctors. The association between perceived risk of violence and education was observed only in doctors and not in nurses.

Workload was associated with the perception of risk of violence. Night shift work was also found to be significantly associated with workplace violence among nurses and doctors.

Table 1: Perception level of violence risk at different hospital level and department

Variable	Doctor	Nurse	All
Area			
Urban	3.30±1.28	3.43±1.23	3.36±1.26
Rural	2.77±1.35	3.07±1.25	2.88±1.32
Hospital level			
Tertiary	3.85±1.14	3.68±1.14	3.76±1.14
Second	3.12±1.20	3.44±1.18	3.29±1.20
Community	2.80±1.33	3.06±1.27	2.90±1.31
Department			
Emergency	4.24±1.01	4.27±0.79	4.26±0.87
Surgery	3.86±1.13	3.61±1.18	3.75±1.16
Icu	4.63±0.52	3.30±1.13	3.68±1.16
Pediatrics	2.91±1.33	3.68±1.14	3.37±1.27
Otolaryngology	3.30±1.37	3.35±0.95	3.32±1.23
Oncology	3.26±1.23	3.39±1.17	3.32±1.19
Internal medicine	3.16±1.23	3.50±1.16	3.32±1.21
Anesthesiology	3.23±1.03	3.00±1.01	3.22±1.02
Obstetrics	2.71±1.33	3.33±1.42	3.14±1.41
Operating room	3.43±1.81	3.08±1.02	3.11±1.09
Gynecology	2.74±1.17	3.18±1.20	2.94±1.20
Medical laboratory	2.91±1.29	2.77±1.46	2.90±1.31
Community doctor	2.78±1.17	2.64±1.31	2.75±1.20
Other supporting	2.62±1.32	3.01±1.23	2.62±1.32

Table 2: Score of perceived violence risk in relation to categorical variables

Demographic characteristics		Doctors (n=1863)	Nurses (n=1434)	Total (n=3297)
Gender	Male	3.25±1.37	3.38±1.16	3.25±1.36
	Female	2.87±1.29**	3.30±1.25*	3.12±1.28*
Age (yr)	18-	3.23±1.32	3.35±1.20	3.30±1.26
	35-	3.17±1.30	3.37±1.21	3.24±1.27
	45+	2.76±1.36**	3.10±1.36**	2.88±1.37**
Education	High School or below	2.47±1.28	3.06±1.30	2.78±1.33
	Junior college	2.93±1.34	3.35±1.24	3.14±1.31
	Bachelor or above	3.47±1.22**	3.59±1.11	3.51±1.19**
Professional Position	Senior doctor	3.50±1.22	3.83±0.98	3.53±1.21
	Medium	3.20±1.33	3.34±1.20	3.26±1.28
	Primary	2.90±1.33	3.28±1.28	3.11±1.32
	Assistant or below	2.49±1.29**	2.82±1.27	2.54±1.29**
Night Shift	No	2.65±1.29	3.06±1.28	2.82±1.30
	Yes	3.48±1.25	3.52±1.17	3.50±1.21
Workload	Overload	3.76±1.27	3.89±1.09	3.82±1.19
	Full load	2.91±1.28	3.17±1.21	3.02±0.26
	Half load or low	2.67±1.31**	2.78±1.26**	3.16±1.31**

* and **: $P < 0.05$ and $P < 0.01$, respectively

In conclusion, this study documented which medical professionals were subject to a higher risk of workplace violence. Thus, effective measures must be adopted to prevent workplace violence in Chinese health care settings.

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