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Frequency and risk factors of workplace violence on psychiatric nurses and its impact on their quality of life in China

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ABSTRACT

This study examined the frequency of violence on nurses in Chinese psychiatric hospitals and explored its risk factors and impact on nurses' quality of life (QOL). A survey was conducted with 387 frontline psychiatric nurses in China. Information about experience of workplace violence in the past 6 months, type of workplace violence, and demographic characteristics was collected by a questionnaire. Altogether 319 (82.4%) of 387 nurses reported having experienced at least one type of violent event in the past 6 months. The prevalence of sexual assault, physical and verbal harassment was 18.6%, 61.5% and 78.6%, respectively. Compared to those with no exposure to violence, nurses who were exposed to violence had lower QOL in both the physical and mental domains. Significant predictors of violence against nurses are male sex, receiving college level or higher education and working on rotating duty were independently associated with high risk of violence. Workplace violence against psychiatric nurses commonly occurs in China. Considering the deleterious effects of violence, comprehensive strategies from the perspective of nursing education and training, organizational policy, patient care and staff support are recommended to promote occupational safety in psychiatric settings in China.

1. Introduction

Workplace violence is a common hazard in clinical settings and may lead to deleterious effects on health workers, such as reduced job satisfaction, commitment and efficiency, poor quality of life (QOL), increased stress, burnout, accidents and illness and even death (Inoue et al., 2006). Of health workers, psychiatric nurses usually face a higher risk of violence than other clinicians because they have the most face-to-face time with psychiatric patients with mood disturbance and psychotic symptoms that may result in sudden, unexpected and sometimes illogical violent behaviors (Merecz et al., 2006). In addition, in some parts of the world, such as China, nurses are not highly respected, which also contributes to high risk of violence (Lambert et al., 2007). In order to develop effective measures to control workplace violence and its deleterious effects, it is essential to determine its frequency and risk factors.

Over the past decades, several studies have been carried out in Western settings and have found that 30–75% of psychiatric nurses have been assaulted during their careers (Arnetza et al., 1996; Poster, 1996). Nurses' factors, patients' factors and contextual factors have been identified to be associated with workplace violence against psychiatric nurses. Past history of violence, severe psychiatric symptoms and poor treatment adherence of psychiatric patients as well as overcrowded psychiatric wards increase the likelihood of violent acts (Whittington et al., 1996; Nolan et al., 1999; Zhu and Xie, 2008). Nurses who had less working experience, higher level of

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job dissatisfaction and worked the night shift reported more workplace violence (Arnetza et al, 1996; Whittington et al, 1996; Shiao et al., 2010; Zhang et al., 2010).

Unlike in Western countries, deinstitutionalization has not been the norm in most Asian countries including China. Community-based mental health services are underdeveloped and psychiatric care is still provided mainly by hospitals in China (Xiang et al., 2012). In China, continuing psychiatric nursing education is not well organized; in most cases continuing education is planned only by hospitals, instead of the Chinese Nursing Association and implemented nationwide. Therefore, findings of Western studies are not applicable to China. Data on workplace violence against psychiatric nurses in China are limited. Liu et al. (2011) interviewed 300 psychiatric nurses and found that 48.1% were often exposed to violence from patients. Zhang et al. (2010) and Zhu and Xie (2008) reported that young and junior psychiatric nurses were more likely to experience violence, and violent behavior often occurred on male wards and at night. However, only univariate analyses were used to explore risk factors of violence in these studies, and factors that independently determine the risk of workplace violence remain unknown.

The purpose of the current study is to: (1) determine the frequency of violence against psychiatric nurses in two major psychiatric hospitals in China; (2) explore the risks for violence against psychiatric nurses; and (3) evaluate the impact of workplace violence on QOL in psychiatric nurses.

2. Method

2.1. Study design, settings and participants

This cross-sectional, anonymous, written survey on psychiatric nurses was conducted in two major psychiatric hospitals selected from the northern and southern parts of China between March 1 and 15, 2012. Hospital 1 has 800 beds, completes 1122 outpatient visits daily and serves approximately 19 million people. Hospital 2 has 280 beds, completes 415 daily outpatient visits daily and serves approximately 10 million people. In Chinese psychiatric hospitals, male and female wards are physically separated. Female nurses work in both female and male wards, but male nurses only work in male wards. Eligible participants included all frontline certified psychiatric nurses providing direct patient care in out-patient or in-patient departments. Certified nurses included Nursing Assistants, Registered Nurses and Nursing Officers. Nurses working in high managerial position that do not provide direct patient care were excluded.

A sample size of at least 300 nurses was required to ensure adequate statistical power for conducting general linear modeling to identify risk factors for workplace violence (Cohen, 1988). All ($N=392$) frontline psychiatric nurses who worked for more than 6 months were invited to participate.

2.2. Assessment tools

A self-reported questionnaire was designed for this study to collect information on demographic characteristics, work experiences, experience and type of workplace violence in the past 6 months, and perceived threat from possible workplace violence in the past week among the nursing participants. Conforming to the definition used in previous studies (Rosenberg et al., 1992; Shiao et al., 2010), episodes of sexual assault with violence, sexual harassment with physical contacts, verbal harassment with sexual content, non-sexual physical violence and verbal threat and abuse by patients or their families were included. Sexual assault with violence referred to the experience of unwelcome sexual advances involving violence; sexual harassment with physical contacts was defined as the experience of any type of unwelcome sexual behavior with body contact; verbal harassment with sexual content referred to the experience of verbal abuse with sexual content; non-sexual physical violence was defined as the experience of being subjected to physical contact (being hit, kicked, slapped, pushed, grabbed, choked, etc) with intention to harm or injure; verbal threat and abuse referred to being sworn at, yelled, called by names or other words intended to control or hurt (Shiao et al., 2010). To evaluate the perceived threat from possible workplace violence, a single question was asked: "*In what percentage of your working time did you feel threatened of being attacked* (*physically or verbally*) *in the past week*?". The Chinese versions of the questions on violence used in this study have acceptable psychometric properties (Shiao et al., 2010).

QOL was evaluated with the Chinese version of the Medical Outcome Study 36-Item Short Form—SF-36 (Xu et al., 1999) that addresses eight health domains: physical functioning, role limitations due to physical problems, bodily pain, general health, vitality, social functioning, role limitations due to emotional problems, and mental health. The SF-36 is a self-report QOL measure that has been extensively used and shown to have acceptable estimates of reliability and validity in Chinese patient populations (Ware and Gandek, 1998; Li et al., 2002). The scaling success rates of discriminal validity ranged from 87.5% to 100% for all domains except for the social functioning; the Cronbach's coefficients of internal consistency reliability ranged from 0.72 to 0.88 for all domains except for 0.39 for the social functioning and 0.66 for the vitality; the 2-week test–retest reliability coefficient ranged from 0.66 to 0.94 (Li et al., 2002). For the purpose of statistical analysis, the first four SF-36 domains (physical functioning, role limitations due to physical problems, bodily pain and general health) were collapsed into a physical component score (PCS), while the remaining four domains formed a mental component score (MCS). These two aggregate components of QOL account for 85% of the variance in the eight SF-36 subscores without the loss of meaningful information (Ware et al., 1994).

2.3. Data collection

The questionnaires were distributed to the nurses personally by the managers of the participating Nursing Departments in the two hospitals. Responses were collected in a sealed box within 1 week. The survey was completed anonymously and confidentially in both sites. Participations returned the completed questionnaires on a voluntary basis. All participating nurses provided written informed consent forms. The study protocol was submitted to and approved by the Clinical Research and Ethics Committees of both hospitals.

2.4. Statistical analysis

The data were analyzed with SPSS 17.0 for Windows (SPSS Inc., Chicago, IL, USA). The comparisons between nurses exposed to violence and those not exposed with respect to socio-demographic characteristics, working experience and QOL were performed using independent sample *t*-test, Mann–Whitney *U* test, and chi-square test, as appropriate. The comparison between nurses exposed and not exposed to violence with respect to physical and mental domains of QOL was conducted by mixed linear model. The variable "study site" was specified as the contextual variable (the level-2 variable); physical and mental QOL domains were entered as the dependent variables, separately, while exposure to any type of violence as the independent variable after controlling for age, gender, marital status, education, duty shift pattern, work experience in psychiatric nursing and job ranking as the covariates. The independent correlates associated with violence were examined by multiple logistic regression analysis with the "Enter" method; exposure to any type of violence was the dependent variable, while age, gender, marital status, education, work shift, work time and job rank were entered as independent variables. The normality of distributions for the continuous variables was checked with the one-sample Kolmogorov–Smirnov test. Two-tailed tests were used in all analyses, with the significance level set at 0.05.

3. Results

The survey response rate was 99% (389/392). Two questionnaires were not completed, leaving 387 included in the analyses. Table 1 shows the basic demographic characteristics of the whole sample and separately by exposure to violence. Nurses exposed to violence in the past 6 months were more likely to work on rotating duty and had work time less than 10 years; they also had lower QOL in both physical and mental domains compared to those who were not exposed to violence. Use of a mixed linear model to control for the hospital effect revealed that the differences between the two groups in terms of the physical ($F_{(1,\ 384.2)}=12.8$, $p<0.001$) and mental QOL domains ($F_{(1,\ 384.5)}=14.0$, $p<0.001$) remained.

Table 2 describes the frequency of violence and percentage of time nurses feel threatened by potential violence. Of the whole sample, 319 (82.4%) nurses reported exposure to at least one type of violent acts in the past 6 months and almost two thirds felt threatened in more than 20% of their working hours in the past week. The prevalence of sexual assault, physical and verbal harassment was 18.6%, 61.5% and 78.6%. Compared with female nurses, male nurses were more likely to have experienced sexual assault and non-sexual physical violence and to report feeling