Cross-Cultural Adaptation, Reliability, and Content Validity of Thai Version of Workplace Violence in the Health Sector Country Case Study Questionnaire

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Abstract
Introduction/Objectives: Workplace violence against healthcare workers has been a global problem including Thailand. However, the study has been limited partly due to lack of the standardized tool in Thai context. Therefore, this study aims to translate “Workplace Violence in the Health Sector Country Case Studies Research instruments,” conducted by WHO, and to validate Thai version questionnaire. Methods: The study was conducted to translate Workplace Violence in the Health Sector Questionnaire by WHO from English to Thai. A sample of 92 participants was accidentally selected among physicians, nurses, and health-supporting workers who took part on examined the validity and reliability of the questionnaire. The internal consistency was calculated using Cronbach’s Alpha Coefficient. Results: The study demonstrated that the index of item-objective congruence (IOC) of Thai version questionnaire is 0.75 to 1. Cronbach’s Alpha Coefficient in Physical violence is .879, Verbal abuse is .934, Bullying/mobbing is .510, and health sector employer is .842. Conclusion: The Thai Version of Workplace Violence in the Health Sector Questionnaire apparently shows good validity and reliability. The questionnaire could be applied to be a useful tool for studying workplace violence in the health sector.

Keywords: workplace violence, health sector, Thai-version questionnaire, translation, validity, reliability

Introduction
Workplace violence is a major problem among workers worldwide. From the United States’ Occupational Safety and Health Administration report, the violence incidents at work occurred approximately 25,000 times per year.1 Healthcare settings accounted for 74% of those incidents and healthcare workers were 4 times more at risk to be victims, compared to other workers.2 Some emergency physicians in a state of the US even obtained guns, knives, etc., for personal protection.3 Healthcare workers in Thailand are also facing workplace violence and at an increasing rate.4 Studies by Saimai et al revealed that most were verbal violence. Related factors were perpetrators who were drunk or drug-addicted, long waiting time, and poor communications. Overall, workplace violence has impact on physical and psychological well-being, such as stress, anxiety, and loss of job satisfaction. Most of the victims did not report the incidents (77%).5 The reasons behind were depending on (1) the severity of the violence (89%) and (2) judgment of the head nurses (35%). Workplace violence was defined by World Health Organization (WHO) as “incidents where staff are abused, threatened or assaulted in circumstances related to their work, including commuting to and from work, involving an explicit or implicit challenge to their safety, well-being or health.”6

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It is categorized by the nature of violent acts as: (1) physical, (2) sexual, (3) psychological, and (4) neglect. Moreover, it is also classified by perpetrators: patients/customers, co-workers, personal relationship, and criminals.\textsuperscript{7} There were many risk factors such as workplace located in the community and night shifts.\textsuperscript{8} WHO developed the Workplace Violence in the Health Sector Country Case Studies Research Instruments in 2003. It comprised of 5 sections in 14 pages: (1) personal and workplace data, (2) physical workplace violence, (3) psychological workplace violence, (4) health worker employer, and (5) opinions on workplace violence. It has been translated from English to other language versions and used in many countries including Thailand.\textsuperscript{9-13} However, researchers in Thailand developed their own versions of the questionnaire\textsuperscript{14} resulted in difficulties of comparing results between different studies.

Therefore, this study was conducted to develop a standard Thai version of Workplace Violence in the Health Sector Country Case Study Questionnaire and examine the content validity and reliability of the Thai version.

**Methods**

**Translation Procedures**

The Workplace Violence in the Health Sector Country Case Study Questionnaire by ILO/ICN/WHO/PSI was translated into a Thai version according to the guideline for the process of cross-cultural adaptation of self-report measures.\textsuperscript{15} The English version was translated into Thai by the principal investigator and an English-fluent family doctor. Then the Thai version was back translated into English by another English-fluent family doctor and a professional translator. The back translators had not seen the original English version before. After each translation, there were meetings to synthesize and resolve discrepancies.

The content validity was reviewed by an expert committee, consisted of 2 occupational physicians, one family physician, and Principal investigator. Those are expert and experiences on Workplace Violence field in Thailand. Then the internal reliability test was done in 92 participants by calculating Cronbach’s alpha coefficient.\textsuperscript{18}

This study has been approved by the Ethical Review Board of the Faculty of Medicine Ramathibodi Hospital.

**Evaluation of the Instrument**

**Participants.** Healthcare workers practicing in health facilities in Thailand. Health facilities were defined by the Health Facility Act, 2016 (also known as the Sanatorium Act)\textsuperscript{16} including health facilities operated by ministries, departments, local government organizations, state enterprises, universities, Thai Red Cross Society, and others.

**Sample size.** Sample size calculation using Bonnett’s Cronbach’s alpha\textsuperscript{17} was at least 17 participants. Prevalence of physical violence from a systematic review by Liu et al was 24.4% and non-physical abuse was 42.5%. Some of included participants may not have experience of violence; therefore, the sample size was increased to 60. The sampling method was conducted by the accidental sampling.

**Inclusion criteria.** Healthcare workers working in health facilities, who were 18 years and older, working in the facility for at least 12 months, fluent in communicating and reading Thai, and willing to participate, were included. Those who withdrew from the study were excluded.

**Measures**

The Workplace Violence Questionnaire Thai version consisted of 5 sections. The first to fourth sections were close-ended and the fifth section was open-ended questions. The first section was related to personal and workplace data, 25 items. The second section was about physical violence, 24 items. The third section was about psychological violence, 4 items with 14 sub items each. The fourth section asked about policy and safety measures in the workplace, 5 items. Finally, the fifth section was opinions on workplace violence, 3 items. Time used for completing the questionnaire was 20 to 30 min approximately.

**Procedures**

Data collection was conducted between December 2019 and January 2020. The pilot study using paper questionnaires had 30 participants. Then the questionnaire was distributed electronically to 62 participants using Google Doc entire the country. Contents in paper and electronic translated questionnaires are the same.

**Statistical Analysis**

Index of item-objective congruence (IOC) was used to evaluate the content validity. The appropriate IOC should be 0.5 or more.

Data analysis was performed by the software SPSS version 18 (Mahidol University’s license) was used for data management and analysis:

1. Participant demographic data and prevalence of workplace violence in health facilities—proportions, frequencies, and percentages
2. Internal consistency was tested by calculating Cronbach’s alpha coefficient\textsuperscript{18}

\[
\text{Cronbach's alpha} = \left(1 - \frac{\sum S^2_i}{S^2_P}\right)
\]

When; \(k\) is the number of items
$S_i^2$ is the variance of item $i$
$S_p^2$ is the variance of the total score
The acceptable value was set at 0.7 or more.

Results

Demographic Characteristics

There were 92 health workers participated in this study, 30 responded to the paper questionnaires and 62 responded to electronic questionnaires, for a response rate of 100%. Most were female and 30 to 34 years old. 57.5% were doctors, followed by nurses and nurse aids. The majorities were staff, working in hospitals and interacting with patients. Two third worked in geriatrics, followed by psychiatry palliative care, and general practice. Others worked in various fields of healthcare system for example; home care, maternal and child health, occupational health and safety, school health, emergency and trauma, dental care, health promotion, laboratory, administrative, disability care, end-stage renal disease care, and surgery. Most of the participants reported the workplace had procedures for workplace violence reporting. Half of them knew how to report when the incident occurred (Table 1).

Incidence of Workplace Violence

Half of the participants (55.4%) reported encounter with workplace violence in the last 12 months. There were 13% physical violence, and 51% psychological violence. For specific types of psychological violence, 48.9% were verbally abused, 10.7% bullying/mobbing, 1.1% racial harassment and 1.1% sexual harassment. Most of the reported participants were female and doctors, except for racial harassment, the victim was a male support staff (Table 2).

Content Validity and Internal Consistency

The IOC from the 4 experts ranged from 0.75 to 1 for each item.

The internal consistency was tested on items related to violence. Cronbach’s alpha coefficients were good for physical violence and employer, very good for verbal violence, and poor for bullying/mobbing. However, the racial and sexual harassment were not reported due to small numbers of responses (Table 3).

Discussion

This study has developed the Workplace Violence Questionnaire Thai version and examine the content validity and reliability in Thai context. However, we did not examine the construct validity since the Thai version was translated from the standard questionnaire. The content validity was satisfactory and the internal consistency was ranged between good and very good, except for the bullying/mobbing items.

The low Cronbach’s alpha coefficient of bullying/mobbing items could result from poor internal consistency, small numbers of items, or low variation of the answers. This could be explained by the similarity of the respondents’ opinions and actions after an encounter with bullying/mobbing. The causes of bullying in the workplace have been a controversial issue in scientific evidence. The imbalance of power between abuser and victim is one of the main causes of bullying that the more powerful person acts against the less powerful of another one. In Thai culture,
the seniority system is very common in the workplace environment. Based on this context, bullying can be found, especially caused by those who are more senior than those who are less senior. These events can occur continuously without anyone realizing they are bullying.

Moreover, items about racial and sexual harassment were responded by one participant each; therefore, the Cronbach’s alpha coefficients could not be determined. This could imply the low incidence of both racial and sexual harassment in Thai circumstance, as well as bullying/mobbing described earlier.

When compared with G. La Torre’s study translated the questionnaire into Italian version, the Cronbach’s alpha coefficients were lower than our study. They ranged from .3091 to .6182, which were unacceptable. The coefficients were higher when included only male participants.21 However, the incident of violence in each forms were similar including the incident of racial and sexual harassment were very few. According to Liu et al’s study, the incident of physical violence was greater than our study, but not different on psychological violence.22

The strength of this study is the large number of participants when compared to the calculated sample size. In addition, we included healthcare workers, both professionals and support workers, from different settings in Thailand. Therefore, the application of this questionnaire could be used in various healthcare settings.

The limitation is the low response of racial and sexual harassment, leading to undetermined Cronbach’s alpha coefficients. Moreover, the length of this questionnaire could cause respondent fatigue,23 then resulted in missing items. This could have impact on the reliability of the questionnaire.

Furthermore, this questionnaire could be applied to study the incident of Thai Workplace Violence in healthcare settings and has suitable for the Thai context. However, Future research should include a sample size large enough to incorporate all forms of the violence, particularly racial and sexual harassment, and more participants who work in shifts and directly interact with patients during work, especially those who work in the emergency department, in-patient service/ward or intensive care unit. The items should be modified and updated for Thai context and re-test for validity and reliability.

**Conclusion**

The Thai Version of Workplace Violence in the Health Sector Questionnaire apparently shows good validity and reliability in physical violence, verbally abused, and employer sections. This Questionnaire could be used for surveys of workplace

| Table 2. Forms of Workplace Violence. |
|--------------------------------------|
| Forms of workplace violence           | Numbers (%) |
|---------------------------------------|-------------|
| Attacked or abused in the last 12 months | 51 (55.4)   |
| Physically attacked                   | 12 (13.0)   |
| Female                                | 10          |
| Occupation                            |             |
| Doctors                               | 7           |
| Nurse aid                             | 2           |
| Support staff                         | 2           |
| Others                                | 1           |
| Psychological violence                | 47 (51.0)   |
| Verbally abused                       | 45 (48.9)   |
| Female                                | 38          |
| Occupation                            |             |
| Doctors                               | 24          |
| Nurse                                 | 6           |
| Nurse aid                             | 6           |
| Clerk                                 | 3           |
| Support staff                         | 3           |
| Others                                | 3           |
| Bullying/mobbing                      | 10 (10.7)   |
| Female                                | 7           |
| Occupation                            |             |
| Doctors                               | 4           |
| Nurse                                 | 1           |
| Nurse aid                             | 1           |
| Clerk                                 | 1           |
| Support staff                         | 3           |
| Racial harassment                     | 1 (1.1)     |
| Male                                  | 1           |
| Support staff                         | 1           |
| Sexual harassment                     | 1 (1.1)     |
| Female                                | 1           |
| Doctor                                | 1           |

| Table 3. Cronbach’s Alpha Coefficient for Each Questionnaire Section. |
|---------------------------------------------------------------|
| Questionnaire section     | Cronbach’s alpha coefficient | Interpretation |
|---------------------------|-------------------------------|----------------|
| Physical violence         | .879                          | Good           |
| Verbal violence           | .934                          | Very good      |
| Bullying/mobbing          | .510                          | Poor           |
| Racial harassment         | -.5*                          | -.5*           |
| Sexual harassment         | -.5*                          | -.5*           |
| Employer                  | .842                          | Good           |

*Cannot calculate Cronbach’s alpha coefficient due to small numbers of responses.
violence in healthcare settings in Thailand. However, the length of questionnaire could limit the practicality; therefore, users could remove the items with low response from our study.

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