ORIGINAL ARTICLE

A survey on workplace violence among pre-hospital care personnel in Malaysia

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ABSTRACT

Introduction: Data on violence experienced by pre-hospital care (PHC) staff in developing countries are lacking. This study investigates incidence, effect, coping reaction, and action taken towards violence received by PHC staff in Malaysia, a developing country.

Materials and Methods: This is a multi-centred cross-sectional survey. Questionnaire modified from the Joint Programme on Workplace Violence in the Healthcare Sector was applied. PHC staff include assistant medical officers, emergency medical technicians (EMTs), nurses, attendants, and ambulance drivers. This questionnaire involves workplace violence (WPV) experienced for 12 months since the beginning of this study among pre-hospital staff of three main hospitals in Klang Valley, Malaysia.

Results: Seventy-one PHC staff personnel responded to this questionnaire. Overall prevalence of at least one WPV incident over past 12 months was 56.3% (95% CI 44.8% to 65.8%). Fifty-three-point-five percent (95% CI 41.9% to 65.1%) experienced verbal abuse, 9.9% (95% CI 3% to 16.8%) experienced physical abuse, and 14.1% (95% CI 6.0% to 22.2%) experienced racial abuse. None of the participants experienced sexual abuse. Out of 38 staff that experienced verbal abuse, 16 (42%) took no action, 8 (21.1%) pretended it never happened, and only 5 (13.2%) filed an actual complaint.

Conclusion: Verbal abuse was found to be the most common type of violence. Younger age group (<29 years) was more exposed to verbal (p = 0.014) and racial abuse (p = 0.007). Majority victims either responded by telling abusers to stop or taking no action at all.

KEYWORDS:
Pre-hospital care, workplace violence, Malaysia, assistant medical officer

INTRODUCTION

Workplace violence (WPV) towards pre-hospital care (PHC) personnel is an alarming phenomenon worldwide.[1] WPV is defined as incident where staff are abused, threatened, or assaulted in circumstances related to their work.[2,3] A study showed that work-related injuries among PHC personnel were three times higher than average for other occupations.[1] This resulted in higher levels of burnout syndrome that includes emotional exhaustion, depersonalisation and lower level of personal accomplishment among PHC personnel when compared to non-healthcare social and administrative counterparts.[4] There are at least two-third of PHC personnel reported in Canada and Australia experiencing WPV within the preceding 12 months,[5,6] while studies done in United States showed up to 93% of PHC personnel reported facing various types of violence throughout their work career.[1] Healthcare worker (HCW) in a public care facility in Italy reported that 1 out of 3 experienced non-physical abuse and 1 out of 10 experienced physical abuse in 2012[7]

Data regarding WPV in Malaysia and developing countries are still scarce and underreported. Furthermore, there is no study done in Malaysia regarding WPV among PHC personnel. Although some measures were taken by the Ministry of Health to control this matter, the incidents are still high and cause negative impact to personnel and organisation.

General objective of this study is to explore violence encountered by PHC personnel in the ground ambulance setting in Klang Valley. Specific objectives were to determine the incident and type of violence involved, effect on PHC staff, coping skills, and action taken to manage the incident. It was hypothesised that there is high incidence of violence experienced by PHC staff in Klang Valley consistent with statistics worldwide. Coping mechanism was expected to be resorted to ignorance.

MATERIALS AND METHODS

Ethical approvement

Ethical approval was obtained from Universiti Kebangsaan Malaysia (UKM) Ethics Committee (Ethical code UKM-ethics committee: FF-2019-091, date of approval: 28/02/2019) for survey done in UKMMC (Universiti Kebangsaan Malaysia Medical Centre). Address for the ethics committee is UKM Research ethical committee, Secretariat of Research and Innovation, Faculty of Medicine UKM, Jalan Yaacob Latif, Bandar Tun Razak, 56000 Cheras, Wilayah Persekutuan Kuala Lumpur, Malaysia. Ethical approval for survey done in other two government hospitals was obtained from Medical Review and Ethics Committee (MREC). Ethical code for MREC: NMRR-18-3816-45146. Address of this committee is National Committee for Clinical Research (NCCR) National

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Pharmaceutical Regulatory Agency, Lot 36, Jalan Universiti, 46200 Petaling Jaya, Malaysia. Study was approved on 26/08/2019.

Study design
This was a multi-centre cross-sectional survey on PHC personnel in three different hospitals in Klang Valley, Malaysia. This study was conducted using modified questionnaire adapted from ILO/ICN/WHO/PSI Joint Programme on Workplace Violence in the Health Sector, Country Case Study Research Instruments.[3] The questionnaire was available in two languages, which were English and Malay, translated and re-translated, and underwent face validation with pre-hospital staff who were not involved in this study.

Investigator approached staff in the PHC unit of each hospital. Explanation was given to participants regarding purpose, risk, eligibility criteria, and benefit of this study. The questionnaires include demographic data and incidence of different types of WPV experienced. Informed and written consent was given by participant before answering the questionnaire.

As the PHC personnel works in shift, investigator had to make a multiple visit at different times to distribute the questionnaire. The approach process stated above was repetitively done on each visit to ensure the understanding of this study for every new subject. Questionnaires that were already been answered were collected instantly by investigator to maintain its confidentiality. Each participant was given some time to complete all the questions immediately. The estimated time to answer all the questions was 30 minutes.

All answered questionnaires from each hospital were collected by the investigator. Once data collection was completed, it was recorded, stored, and analysed in Statistical Package for Social Science (SPSS) Statistics for Windows, version 26.0 (IBM Corp., Armonk, N.Y., USA). No personal information will be published to maintain participant's confidentiality strictly.

Setting
Setting of this study was at pre-hospital unit of Universiti Kebangsaan Malaysia Medical Center (UKMMC), Hospital Tengku Ampuan Rahimah, Klang (HTAR), and Hospital Kuala Lumpur (HKL), Malaysia. Survey was conducted for 3 months from 1st of June to 31st August, 2019.

Eligibility criteria
All PHC staff, including assistant medical officer (AMO), nurse, and ambulance driver from the three different hospitals, were included in this study. Participants were actively working in the PHC units taking ambulance calls for the past 12 months. Unreturned or incomplete questionnaire was excluded from the study. Method of selection was based on convenience sampling. Each participant had to answer all the questionnaires within 30 minutes. Assistant medical officer role.[8]

Pre-hospital medical assistant practice is in accordance with nationally accepted standards: a) initial assessment of patients and immediate intervention deemed necessary where relevant such as triaging of patients for emergency services and PHC patients; b) administering treatment and performing procedures as ordered by the medical practitioners via online or offline medical direction; c) reviewing and reporting changes in the progress of the patient where relevant; d) completing the planned management with proper documentation.

PHC medical assistants shall be trained in basic life support (BLS) within 2 months after being placed in the emergency services. All medical assistants in the emergency services shall continuously participate in Advanced Life Saving and Trauma Programme (Malaysian Trauma Life Support [MTLS]/Advanced Trauma Life Support [ATLS]/Advanced Cardiac Life Support [ACLS]/Pediatric Advanced Life Support [PALS]) or any advanced programme done by emergency services within 2 years after being placed in the emergency services.

Emergency medical technician (EMT) is the minimum licensure level for personnel transporting patients in ambulances. The scope of practice is limited to basic skills that are effective and can be performed safely in an out-of-hospital setting with medical oversight and limited training. Usually, an attendant is employed and given basic training such as BLS. An EMT has the skills to assess a patient's condition and to manage respiratory, cardiac, and trauma emergencies. Furthermore, advanced management will be passed over to the AMO, which is equivalent to a paramedic. EMT in this study is equivalent to an EMT basic level in the United States. EMT unfortunately is only available in PPUKM, a teaching hospital, whereas in other hospitals EMT does not exist, and role is replaced by AMO and medical attendant. This explains the grouping of AMO/EMT/medical attendant into one category.

The pre-hospital nurse provides nursing care and functions under the direction of an administrative base hospital, which is the head of nursing, and emergency physician through policies, procedures, medical protocols, and/or standing orders to maintain appropriate and effective levels of care for the patient. Nurses in PHC PPUKM is mainly midwifery, a health professional trained to support and care for women during pregnancy, uncomplicated labour and birth at the pre-hospital setting. Nurses are from the obstetric unit that connects directly with the pre-hospital unit when responding to calls from a patient who is in labour.

Variables
Outcome from the survey is to determine incidence of WPV among PHC personnel in Klang Valley (Malaysia). Other outcomes are to establish the impact of WPV towards coping mechanism and response.

The questionnaire consists of two major sections: demographic data and physical and psychological violence experienced by the PHC personnel. The psychological violence includes verbal, bullying/mobbing, and sexual harassment. Each type of violence was arranged in various colour codes. Red colour was coded for physical violence, blue was coded for verbal abuse, yellow was coded for bullying/mobbing, green was coded for sexual harassment,

Table I: Sociodemographic distribution of respondents

Variables	Frequency (N = 71)	Percentage (%)
Age:		
20–29	23	32.4
30–39	41	57.7
40–49	4	5.6
50–59	3	4.2
Gender:		
Male	65	91.5
Female	6	8.5
Race:		
Malay	65	91.5
Chinese	3	4.2
Indian	2	2.8
Others	1	1.4
Marital status:		
Single	14	19.7
Married	57	80.3
Professional group:		
AMO/EMT	51	71.8
Nurses	4	5.6
Drivers	16	22.5
Years of experience:		
1–5 years	27	38.0
6–10 years	26	36.6
11–15 years	16	22.5
More than 20 years	2	2.8

Table II: Breakdown of violence experienced and witnessed by PHC staff in Klang valley for past 12 months

	Physical Attack	Verbal Abuse	Bullying/ Mobbing	Sexual Harassment	Racial Harassment	Total
Types of violence experienced	7 (11.5%)	38 (62.3%)	6 (9.8%)	0 (0%)	10 (16.4%)	61
Types of violence witnessed	18 (20.7%)	42 (48.3%)	9 (10.3%)	3 (4.2%)	15 (21.1%)	87
Occurrence of violence witnessed						
Once a month	17 (33.3%)	17 (33.3%)	8 (15.7%)	2 (3.9%)	7 (13.7%)	51
Few times/month	1 (4.8%)	12 (57.1%)	1 (4.8%)	1 (4.8%)	6 (28.6%)	21
Every week	1 (25%)	2 (50%)	0	0	1 (25%)	4
Near daily	1 (7.8%)	11 (84.6%)	0	0	1 (7.8%)	13
Perpetrator profile						
Patient	5 (13.5%)	24 (64.9%)	2(5.4%)	0	6 (16.2%)	37
Patient's relatives	5 (15.2%)	19 (57.6%)	3(9.1%)	0	6 (18.2%)	33
Public	5 (11.1%)	30 (66.7%)	4 (8.9%)	0	6 (13.3%)	45
Colleague	0	2 (25%)	4 (50%)	0	2 (25%)	8
Supervisor		3				3
Victim profile						
Assistant medical officer	6 (11.5%)	32 (61.5%)	5 (9.6%)	0	9(17.3%)	52
Nurses	0	4 (66.7%)	1(16.7%)	0	1(16.7%)	6
Drivers	1 (33.3%)	2 (66.7%)	0	0	0	3
Place of incident						
At response scene	4	25	4	0	4	37
In ambulance	3	10	2	0	1	16
In hospital/institution	6	29	4	0	8	47

Table III: Individual responses towards each type of violence experienced

Victim's reactions	Physical Attack	Verbal Abuse	Bullying/Mobbing	Sexual Harassment	Racial Harassment
Took no action	1 (8.3%)	16 (22.5%)	2 (25%)	0	2 (10.5%)
Pretend it never happened	1 (8.3%)	8 (11.3%)	2 (25%)	0	4 (21%)
Asked the person to stop	4 (33.3%)	18 (25.3%)	0	0	6 (31.6%)
Told family/friends/colleagues	2 (16.7%)	11 (15.5%)	2 (25%)	0	4 (21%)
Report to senior staffs	3 (25%)	11 (15.5%)	1 (12.5%)	0	1 (5.2%)
Sought counselling	0	1 (1.4%)	0	0	0
File incident reporting	1 (8.3%)	5 (7%)	0	0	2 (10.5%)
Others	0	1 (1.4%)	1 (12.5%)	0	0

Note: frequency, n (%)

and orange was coded for racial harassment. The definition of each type of violence was adopted from ILO/ICN/WHO/PSI and included in the questionnaire.

RESULTS

This questionnaire involves WPV experienced by pre-hospital staff in three main hospitals in Klang Valley, Malaysia, for past 12 months. Seventy-one pre-hospital staff personnel responded to this questionnaire, and the overall prevalence of at least one WPV incident over past 12 months was 56.3% (95% CI 44.8% to 65.8%). Fifty-three-point five percent (95% CI 41.9% to 65.1%) experienced verbal abuse, 9.9% (95% CI 3% to 16.8%) experienced physical abuse, and 14.1% (95% CI 6.0% to 22.2%) experienced racial abuse. None of the participants experienced sexual abuse. Out of 38 staff that experienced verbal abuse, 16 (42%) took no action, 8 (21.1%) pretended it never happened, and only 5 (13.2%) filed an actual complaint. Verbal abuse was found to be the most common type of violence. Younger age group (<29 years) was more exposed to verbal (p = 0.014) and racial abuse (p = 0.007). Victims are bothered by the incident's majority responded by telling them to stop.

Demographic characteristics

Total staff of PHC units in the three centres were 118. Ninety questionnaires were distributed. Out of this total number of samples, only 71 participated, as of a number of staff were transferred to different units, did not fulfilled inclusion criteria, or did not complete the form due to failure to recall incidents within one year. Three did not complete (missing data) and 16 did not return the questionnaire. Demography of the respondents is shown in Table I.

Factors contributing towards violence

Younger age (20–29 years old) was found to be a significant factor that contributed to verbal abuse (p = 0.014) and racial harassment (p = 0.007) (Pearson chi-square). Other factors were not significant in contributing towards violence experienced by respondents.

There is no significant difference among working groups who experienced physical attack, bullying, and racial harassment. In addition, working experience was also found to have no significant different towards the incident of violence in all types. Another factor contributing towards violence is location. Majority incidents of all types of violence experienced occurred either at scene or in the hospital compound (Table II).

Effects of physical violence towards PHC personnel

The effect of WPV towards individual personnel was explored in terms of physical injuries and psychological health impacts. Among seven respondents who experienced the physical attack in 12 months, only one respondent who sustained injury, whereas two of them (29%) needed 'time off' from work for 2–3 days. Most of these respondents (71.4%) could not recall the day of incident but the attacks were found to be common within 1300 to 1800 hours (71.4%).

Response towards violence

In this part, individual and systematic responses towards violence are explored. Individual response includes coping strategies among victims, while systematic response includes reporting procedure and intervention done towards violence experienced. Table III summarises individual responses to each type of violence.

DISCUSSION

This is the first study on abuse of PHC staff in Malaysia. A significant number (N = 71) of respondents were obtained from the three hospitals in Klang Valley. High prevalence of WPV among PHC personnel was expected. Fifty-six percent respondents reported at least one type of violence in the past 12 months. Percentage of PHC personnel experienced any types of violence in the past 12 months was lower than previously reported elsewhere. For instance, this Malaysian survey of WPV was lower than other middle-/low-income countries such in India, where the prevalence was 67.9%.[9] Our study also revealed significantly lower WPV than reported by EMTs in Australia and Sweden where more than 80% had first-hand experience during the past 12 months.[10,11]

A number of factors associated with increased likelihood of violence were identified. Younger age is associated with higher exposure to violence as reported by Gormley et al. and Kasara et al.[1,12] Younger age group has significant correlation with higher incident of verbal abuse.[12] In this study, the younger age group (<29 years) was more exposed to verbal (p = 0.014) and racial abuse (p = 0.007). In this study, however, there was no significant correlation on abuse incidence between shorter working experience (less than 5 years) in comparison to longer working experience (more than 10 years). This is a stark contrast when compared to previous studies where personnel who have working experience of less than 5 years has higher incident of violence.[1,12] Age does not correlate directly to working experience, as some staff might have started later in the pre-hospital workforce from others.

Although more than 90% of respondents in this study were males, all female respondents were found to experience at least one of any type of violence. This was also observed in other studies, in which females were reported having higher prevalence to violence[1,5] The more common perpetrator of violence reported are patient's relative, patient himself, and public observed. These findings are akin to several other studies observed.[3,13] In fact, there are a several types of acts of violence that were committed by two or more perpetrators. Nevertheless, none of our respondents had reported of having encountered any sexual harassment in the past 12 months.

In various studies worldwide, an AMO/EMT has higher exposure to violence in comparison to driver, nurses, or attendant[3,14] It is similar to this study; however, there is a bias effect since majority of respondents consist of AMO/EMT.

In this study, race and marital status did not show any significant different to the likelihood of violence to occur. These findings are similar to the study done by Kasara et al.[12] where ethnicity and marital status in a country like Thailand also did not show any significant value when compared to any types of violence. However, the ethnic breakdown of the participants was also skewed in which 91.5% are Malay.

Verbal abuse was found in this study to be the most common type of violence (53.5%), consistent with most of the literature reports elsewhere.[5,12,14] Verbal abuse is a known hazard for healthcare-related personnel.[15] Kasara et al.[12] found that the most common perpetrator for verbal abuse was by colleagues or staff members. In contrast to study done by Kasara et al., this study showed no significant different between places of incident on any types of violence. A study on pre-hospital paramedic personnel in Iran in 2019 showed 47% out of 308 respondents faced verbal assault.[16] Verbal assaults towards PHC personnel are not uncommon and occur mostly at the emergency site.[17] However, our study revealed that verbal assaults towards paramedics occur in hospitals and could be delivered by hospital personnel. Overcrowding in emergency departments has become worldwide problem, which affected the location of study.[18] Heavy workload and emergency department overcrowding could increase verbal assault among colleagues of same fraternity due to being held in departments for prolonged periods and unable to transfer care to the respected hospital staff.[10,19,20]

Physical attack (9.9%,95% CI 3% to 16.8%) in this study was lower than reported in metropolitan regions in developed countries.[15,17,21] It was reported in 1998 that emergency medical services providers in a southern California metropolitan area on out of 490 samples analysed, 61% recounted assault on the job throughout working experience, with 25% reporting injury from the assault. Respondents reported a median of three episodes, and the number of assaults for each individual was unrelated to the number of years of experience on the job (r = 0.068). Of those injured, 37% required medical attention.[21] It was often described that people of Asian background have tendencies to avoid confrontation and conflict.[22] According to the data gained from this study, the connotation still holds in Malaysia as compared to other Asian countries.[9,23,24] Strict firearm control and heavy punishment in illegal firearms possession in Malaysia might have contributed to this result.[25] High number of physical abuse reported in Swedish ambulance (16% for the past year) is associated with drug and alcohol abuse.[26] This can be translated with lower incidence of alcohol-/drug-related violence experienced by our pre-hospital staff.

It is observed in this study that the most common response towards physical violence and verbal abuse is 'telling the perpetrator to stop'. Other common responses, including 'pretending that nothing happened', 'telling other family members or friend', and even 'taking no action' against the violence, were reported. These findings are quite similar to other similar studies done. Less than 10% of incident of violence were actually filed with incident reporting, similar to a study done by Alharthy N (2017).14 Daniela et al.[13] reported that only one third of volunteers and HCW who were victims of psychological and physical abuse reported to higher authorities.

Implications for policy, practice, and research

Abuse towards PHC is prevalent in developing countries. According to this study, verbal abuse consists of majority endured by the staff. In Malaysia and across much of the world, there is lack in specialised training on how to manage WPV and safety threats. Most respondents did not receive any training on how to deal with such incidents.

Few steps for improvement can be considered in improving facing and reaction to abuse. First is the knowledge of special populations, sensitivity, and attitude of different socioeconomic conditions in a multiracial Malaysia. Multiple webinars and tutorials with experts in the field can assist. Second is the ability to restrain or defend oneself from abuse, especially physical and sexual abuse. De-escalation technique should be applied, rather than training each PHC staff with self-defence, improving social soft skills would be more beneficial and cost effective. Third is developing systems for advanced warning about potentially violent patients in liaison with police and law enforcers. Collaboration with other public or private EMT in detecting hot zones is crucial in order to take precautionary steps when responding to scene.[9]

These results show limited research to date, suggesting that a much broader effort is required to address workplace safety and violence among EMTs. Pathways for improved recognition and reporting of WPV are required. Specialised training programme for EMTs on dealing with WPV would be extremely beneficial. Finally, EMTs should be covered by regulations and/or policies to protect HCWs. Access to counselling facilities is limited, and administrators need to acquire more encouragement in this aspect.

LIMITATIONS AND RECOMMENDATIONS

The main limitation of this study is that it adopts a small convenience sample size. There is high incident of selection bias. The sample size counted earlier was 90, of which only 71 respondents were accepted. This is because, in most of healthcare settings, the number of staffs for PHC unit was estimated roughly since the exact number of each professional group was keep changing. Since some of the staffs were transferred to other department/ hospital and some went for post-basic programme, these staffs may be replaced by new staffs or recruited from other department/hospitals. Therefore, the number of personnel that fulfilled the inclusion criteria of actively working in the past 12 months was reduced. Furthermore, almost 10% of questionnaires distributed were not returned. It was also observed that some of the returned questionnaires were not fully answered. There is the possibility of information bias, as personnel may not have been able to recall all instances of violence occurring over the past 12 months.

The sampling method was convenience sampling; hence, there is potential bias of under-representing the population of PHC staff throughout Malaysia. Data of population is skewed in terms of race, gender, and professional group. Males are widely represented, while in health professions around the world, and even in Malaysia, females are in the majority. However, for pre-hospital staff, including paramedics, AMOs, and drivers, male gender still represents the majority of responders. Thus, exact data for Malaysian PHC staff is not available.

Another limitation is that AMO and EMT were grouped under one category due to inconsistent definitions and work scope throughout different hospitals. For example, in PPUKM, EMT is employed among SPM leavers and attendants who have undergone BLS training, whereas the definition of EMT does not exist in KKM hospitals, where the hierarchy is senior

AMO, AMO, and medical attendant.[27] As the work scope differs from each hospital, hence the sample category for EMT will be small if separated from the others. The results of this study cannot be generalised as representing the whole population in Malaysia, as other confounding factors are present such as rural/urban areas and areas with different race/sociodemographic distribution. As many of them are affected, education and support group should be provided to those identified as high risk for WPV. As the study was done before the pandemic, the similar study should be conducted during or post-pandemic era to assess the WPV.

CONCLUSION

This study raises awareness to the prevalence of violence among PHC personnel in Malaysia and the factors associated with the violence experienced. Verbal abuse was found to be the most common type of violence among PHWC personnel. It was found that among our respondents, AMO/EMT had a significant higher incident of abuse. Age was a significant factor towards abuse, whereby age of 29 years or younger were the most susceptible. Victims were found to be bothered by the incidents, but the majority responded by only telling family and friends or asked the abuser to stop, while others did not take any action against the abuser.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

FUNDING DETAILS

This research received no funding.

CONSENT

Consent has been obtained from participants for the questionnaire. Consent and information for participants are provided in the appendix.

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