ORIGINAL ARTICLE

Integrated Exploration on the Barriers to Reporting Workplace Violence Among Public Hospital Healthcare Workers in Melaka

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ABSTRACT

Introduction: Workplace violence (WPV) among healthcare workers (HCW) remains a significant public health concern in Malaysia. Objective: This research aimed to quantitatively and qualitatively compare the barriers to reporting of WPV among the HCWs. **Materials and methods:** A concurrent mixed method study design was conducted involving Malaysian HCWs in Melaka public hospitals. Respondents in the quantitative study were recruited using stratified random sampling method. Meanwhile, in-depth interviews were performed using a validated semi-structured interview protocol among HCWs who experienced WPV but chose not to report. **Results:**Higher likelihood to report WPVs among those with high subjective norms (AOR=2.160, p=0.002) and perceived behaviour control (PBC) (AOR=3.976, p<0.001), as well as clinical (AOR=2.679, p=0.002) and non-clinical (AOR=4.271, p<0.001) support staffs were observed. Physical and both types (physical and psychological) WPV had 13 (p<0.001), and two (p=0.018) times more likelihood to be reported compared to psychological. Meanwhile, those who perceived the WPV was done intentionally had 11 (p<0.001) times more likelihood to report WPV compared to otherwise. Perceived norms, process barriers, and attitude/ beliefs towards reporting of WPVs themes emerged in qualitative findings. Integration analysis revealed comparable results. **Conclusion:** Persistent barriers to the reporting of WPV among HCWs were highlighted which include perceived norms towards WPVs in the sector, the misconception that only severely inflicted violence should be reported, and PBC towards reporting WPVs. The reporting of WPVs can be improved by changing HCWs' misperception on the norms of WPVs, the reporting system and mechanism, as well their attitude and beliefs towards reporting of WPVs.
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INTRODUCTION

Violence at workplace is a dangerous occupational related hazard globally, and has been referred to as a spectrum of threat or an act of violence ranging from verbal abuse to even lethal physical assaults occurring at work or while on duty (1). It is frequently reported among the healthcare workers (HCWs) compared to workers from other industries, with HCWs having four times higher exposure compared to others (2). As opposed to the more common verbal aggression, approximately about 8% to 38% of HCWs have encountered physical violence at some point in their careers (3).

The risk of assaults among workers are highly preventable if the risks are effectively identified and appropriate precautions are taken through the availability of related policy and regulation. Unfortunately, despite alarming statistics on the prevalence and impact of WPV, evidence suggests that such incidents are significantly underreported. In the early 1980s, assault rates were underreported by up to 80%, and more recent studies indicate that this figure remains high, ranging from 88% to 93.5% (4–7). Nurses were among the HCWs commonly facing WPVs, with one in four experience physical violence annually (8) due to the direct contacts with patients, as well as the family members and visitors (9), but only between 20 and 60 percents reported the incidents (2). Furthermore, the misperception that WPVs are part of being a HCW puts them at higher risk. The reasons for the underreporting of these incidents have not been well examined. Several studies have indicated reasons for this such as (10,11): nurses tend to believe that being assaulted occasionally is simply an unpleasant part of their job; they feel reluctant to report

an incident if patients did not intend harm; they may experience pressure from colleagues or supervisors not to report the incident; they may fear that the incident will result in accusations of negligence or inadequate performance; and they often believe that supervisors and administrators will not follow up on reports. Some studies have implicated individual characteristics such as gender, work experience, and area of practice as factors associated with reporting behaviour (12,13). Barriers to reporting WPVs or causes of underreporting are complex and have not been thoroughly studied.

Reporting of any occupational illness and injury, including WPV should be made aware as the foundation of workplace-based interventions to improve the safety and health of workers in general (4). However, underreporting of adverse workplace events is a complex and multi-faceted problem (14) and a significant barrier to injury prevention generally and to the prevention of WPV specifically (4). OSHA estimates that two-thirds of all workplace-related injuries and illnesses go unreported (15).

In general, underreporting of violent events refers to the failure of victimised employees to report these events, either to the employers, the police, or other officials (16). It hinders violence prevention efforts through underestimation of the potential negative effects and extent of the problem than what may actually be warranted (4). Furthermore, without knowledge of the full spectrum of violent events to which workers are exposed, prevention efforts can only be designed to affect limited aspects of the problem (4). A violent event is more likely to formally report if employees were injured or lost time from work.

WPV against HCWs is also on the rise in Malaysia with 30% reported in the hospital setting compared to 24.3% in the primary care and community-based setting (17). Verbal abuse being the highest WPV reported at 70%, followed by physical abuse ate 33%, bullying at 25% and sexual harassment at 4% (18). According to the Ministry of Health Malaysia, HCWs were most prone to the Type II (Patient/ Visitor) WPV (18). Guidelines and training modules were developed to tackle this issue, specifically on the WPV prevention for HCWs (17). Unfortunately, awareness on the important of reporting WPV still low causing the prevalence of WPV against HCWs in Malaysia continues to increase. Published research on this issue in Malaysia mainly focuses on conducting quantitative surveys to determine the overall WPV instead of specifically addressing the reporting or underreporting of incidents. This lack of research hinders the development of effective strategies aimed at reducing underreporting of WPV. This study was conducted to get deeper insight and understanding on the reporting behaviour of WPV through the use of mixed methods approach.

MATERIALS AND METHODS

Study Design and Sampling

In order to understand the factors associated with the reporting behaviour of WPV among the public hospital HCW in Melaka, a concurrent mixed method study design was conducted. Melaka is the second smallest state in Malaysia, located in the southern part of the of the Malaysian Peninsula. It consists of three districts: Melaka Tengah, Jasin, and Alor Gajah. Each district has a public hospital; two of these are secondary hospitals (Alor Gajah Hospital and Jasin Hospital), and one is a tertiary hospital (Melaka General Hospital), and HCWs from these public hospitals were involved in this research. Melaka was selected for this study in view of the alarming sexual harassment incidents reported at 51.2% among the registered female nurses (19) and a six-month prevalence of 38% of HCW working in ED in these public hospitals experienced WPV (20).

Quantitative Study

Sampling and Sample Size

A cross sectional and a basic qualitative study designs were conducted concurrently. Malaysian HCWs with minimum working experience of 12 months in the public hospitals, Melaka who had experienced WPV within the past 12 months period from the time of data collection were sampled for the quantitative study, using stratified proportionate to size random sampling. The required sample size was calculated using the two proportion sample size calculation, based on the proportions of WPVs reported by male and female HVWs in a study conducted by Arnetz et al., (6). The estimated sample size calculated was 611 after anticipating a 10% non-response rate.

Study Instrument

The dependent variable was the reported WPV. The independent variables included the TPB constructs (i.e., behavioural intention, behavioural attitude, subjective norm, and PBC related to the reported WPV), sociodemographic profile (i.e., age, sex, race/ ethnicity, and educational level), work profile (i.e., occupation and years of experience in the healthcare sector), and WPV-related data (i.e., type of encountered WPV, identity of the perpetrator, and perceived intention of the perpetrator). A valid and reliable self-administered questionnaire in Malay language consisted of three sections: personal and workplace data (Section A), workplace violence and reporting data (Section B), and TPB data (Section C), was used in this study. All sections were developed by the researchers. In particular, Section C was developed using a guideline for constructing TPB-based questionnaires (21).

Section A (Personal and workplace data) recorded the respondent's sociodemographic profile such as age in

years, gender as male or female, race/ ethnicity either Malay, Chinese, Indian or others, and educational status. This part also recorded data regarding respondents work profile such as workplace, occupation (specialist/ consultant, medical officer, assistant medical officer, supervisor assistant medical officer, staff nurse, sister/ matron, community nurse, ambulance driver, health attendant, administration/ clerical, or others), and working experience in health sector in years.

In section B (Workplace violence and reporting data), data on respondents' workplace violence experience and reporting were collected, which include the type of WPV experienced, who was the perpetrator, and the perceived intention of the perpetrator. Next, the respondents were asked whether they report the WPV incident formally in written form or not. If they experienced more than one episode of WPV for the past 12 months, the characteristics of the most recent incidents were taken.

On the other hand, section C measured the TPB data, namely the behavioural intention, attitude, subjective norm, and PBC towards WPV reporting. Each question uses seven-point Likert scale. Each question was scored on a 7-point Likert scale. Behavioural intention was measured with four items, attitude with ten items, subjective norm with nine items, and PBC with ten items. Since the data were not normally distributed, median scores were used as the cut-off point to classify responses into low and high behavioural intention, low (negative) and high (positive) attitude, low and high subjective norm, and low and high PBC scores.

The questionnaire was screened through by a panel of experts with the aim of making the questionnaire as brief as possible for easier administration by the respondents while gathering sufficient data regarding workplace violence reporting behaviour. The explanation regarding WPV, physical violence, as well as psychological violence were also included in the questionnaire to ensure the respondents understand the questions asked. The questionnaires distributed were in Malay Language (Malaysia National Language) with translation process done as per World Health Organisation guideline.

Quality Control

The content of the questionnaire was reviewed and validated by three expert panels from related fields. In this study, all items were marked as "essential" with content validity ratio (CVR) value of +1.0. Exploratory Factor Analysis (EFA) was conducted for items in section C to identify the underlying relationships between the measured variables. The factorability of the 35 TPB items was initially examined, and it was observed that 29 of the 35 items have correlation of at least 0.3 with at least one other item. This suggested reasonable factorability. Next, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was noted to be 0.882. This value was above the cut-off value that was considered suitable for factor analysis when the item to sample ratio was less than 1:5 which is 0.5 (22). KMO value of ≥0.8 was meritorious; ≥0.7 was middling; ≥0.6 was mediocre, ≥0.5 was miserable, and lastly, < 0.5 was unacceptable (23). Since the KMO in this research was 0.882, the quality was considered as excellent. Bartlett's test of sphericity was significant (χ^2=11853.67, df=595, p<0.001). Lastly, the communalities were all above 0.4, where a cut-off value of 0.4 was preferred by contemporary scholar as a minimum acceptable communality value to retain or remove an item (24), further confirming that each item shared some common variance with other items.

Next, all of the 35 items were first subjected to oblique rotation (direct oblimin) under principal components factor analysis to examine the correlation matrix. It was noted that an insufficient substantial correlation between factors was revealed by the correlation matrix while using oblique rotation. Therefore, varimax, the most widely used orthogonal rotation, with ten factors explaining 72.59% of the variance, was selected to produce a rotated factor solution that was interpretable and conceptually sensible due to its previous theoretical support. The ten factors retrieved from this EFA were subsequently combined into the four constructs of the TPB namely the behavioural attitude, subjective norm, perceived behavioural control, and behavioural intention.

Reliability analysis was subsequently commenced once a sensible factor solution was achieved. The Cronbach's alpha values for the behavioural attitude, subjective norm, and PBC towards reporting of WPV were 0.834, 0.862, and 0.686 respectively, which are considered as moderate to high reliability (25). The Cronbach alpha for behavioural intention towards reporting of WPV was 0.510, which was above the 0.5 acceptable level because it is difficult to obtain higher value if the construct have less than ten items (26). No substantial increases in alpha for any of the scales could have been achieved by eliminating more items. Face validity testing was conducted with 65 healthcare workers (HCWs) from a neighbouring hospital.

Data Collection and Analysis

The quantitative data collected through this questionnaire was subsequently analysed using IBM SPSS version 26. Data for each continuous variable were checked for normal distribution. Descriptive statistics of the TPB factors and other factors (age, gender, ethnicity, educational level, occupation, working experience, types of violence, perpetrator's identity, and perceived perpetrator's intention) were presented in frequency, percentage, mean and standard deviation for normally distributed data, or in median and interquartile range for data that was not normally distributed.

Relationship between the dependent and independent

variables were examined by using Chi-square test for categorical independent variables. Next, simple logistic regression was used to look for significant relationship between the variables to be put into the multiple logistic regression. Subsequently, multiple logistic regression was used to examine the predictors of reporting of WPV. Results were expressed as odds ratio, with level of significant was set at 0.05 ($p<0.05$) and the association is considered significant if the 95% confidence interval (CI) not crossing number one.

Qualitative Study

Sampling and Sample Size

Concurrently, HCWs who had experienced WPV but did not report the event were sampled for the qualitative study. Informants were conveniently identified based on a list of respondents who did not report their WPV, obtained from the quantitative study. The researcher used the same list of all HCWs who had experienced WPV, similar to the sampling frame in the quantitative study. As the respondents for the quantitative study were given the questionnaires to answer, they were also invited to participate in the qualitative study if they were willing and met the inclusion and exclusion criteria. Their contact numbers were collected and added to the list. This list also contained number codes corresponding to the codes in the questionnaire they had answered, allowing the researcher to cross-reference their responses. This procedure was used solely to screen respondents' eligibility for inclusion in the qualitative study. The questionnaires from the quantitative study, however, did not contain any personal or identifying information and were analysed anonymously.

After completing their questionnaires for the quantitative study, the researcher reviewed the screening questions to determine whether the respondents met the inclusion criteria. Identified HCWs who did not report WPV were then invited for an in-depth interview either immediately or were contacted later via phone or message to schedule the interview at their convenience. Through this sampling method, the informants were a subset of respondents from the quantitative study. This approach aligns with the recommendation to use the same participants for both quantitative and qualitative data comparison, thereby avoiding the introduction of extraneous information that could hinder the researcher's ability to merge the results effectively (27).

As opposed to quantitative study, the sample size was not fixed prior to data collection, and were determined on the basis of saturation point of information, where no more new insights or themes being observed to answer the research questions (28).

Data Collection and Analysis

Semi-structured interview (SSI) was employed for data collection which was guided by an interview protocol. The researcher had decided on initial analysis of six informants, and three further interviews for stopping criterion. All the interviews were voice recorded using a portable voice recorder. Consent was obtained from the informant prior to the recording started. Each interview started with an ice-breaking session to ensure that both the researcher and the respondent are comfortable with each other. General questions such as the sociodemographic information and working experience were asked first, before proceeding to questions stated in the interview protocol. This was done after the researcher felt that the respondent is at ease, comfortable, and a good rapport have been established. The average duration of the interview was about an hour depending on the willingness of the interviewee to talk and the time constraints of the interviewee.

Each transcript was analysed and coded independently by the primary researcher before moving to the next participant in order to constantly compare the ideas and coding generated. Data analysis in the qualitative phase is a continuous process once the interview audio has been transcribed, as the initial findings obtained by the researcher provides a hint and probe for subsequent interviews with the next respondent, a method known as 'zigzag method' to achieve saturation point of information. Inductive and deductive thematic analyses (TA) were used to analyse the data. TA is preferred because its added strength which include flexibility, the extent of commentary possible, the capability to summarise the data competently and the possibility for a rich, thick description (29).

Rigorousness was ensured through the application of trustworthiness principles. To establish trustworthiness in a qualitative inquiry, the study appeal to the criteria of credibility (internal validity), transferability (external validity), dependability (reliability) and confirmability (objectivity) as parallel terms to be used instead of validity and reliability used by the positivist in quantitative type of research. The findings of the quantitative and qualitative studies were integrated, with findings from both studies were compared and contrasted to look for complementary or contradictory findings according to the study objectives and research questions.

Ethical Clearance

Ethical approval was obtained from the Medical Research Ethic Committee (MREC) Ministry of Health and was registered under National Medical Research Register (NMRR-20-1836-56140). Written consents from the respondent prior to participation of this study were obtained during the data collection period.

RESULTS

Quantitative findings

Out of 611 eligible HCWs selected through proportionate stratified random sampling, all agreed to participate.

A total of 611 questionnaires were distributed, with 584 returned. After excluding 27 incomplete sets, 557 complete questionnaires were used, resulting in a response rate of 91.2%.

Table I illustrates the background characteristics of the respondents. The respondents' ages ranged from 20 to 60 years, with a median age of 33 years and an interquartile range (IQR) of nine years. The largest age group was 30 to 39 years, representing 44.9% of the respondents. The sample consisted of 33.8% males and 66.2% females. Most respondents were Malay (79.7%), were diploma holders (43.6%), working as staff nurses (18.7%), and had a working experience of less than five years (34.3%). The respondents' working experience ranged from one to 33 years, with a median of eight years and an interquartile range of ten years. The scores for each TPB constructs were almost equally distributed among the respondents. Most respondents did not report WPV (68.2%), with 74.7% of psychological WPV incidents going unreported. In contrast, the majority of physical WPV incidents (76.9%) and incidents involving both types of violence (57.6%) were reported by the victims.

Table I: Background characteristics of the respondents (N=557)

Variables	Frequency (%)	Median (IQR)
Age (years)		33 (9)
≤29	184 (33.0)	
30-39	250 (44.9)	
40-49	102 (18.3)	
≥ 50	21 (3.8)	
Gender		
Male	188 (33.8)	
Female	369 (66.2)	
Race/ ethnicity		
Malay	444 (79.7)	
Chinese	55 (9.9)	
Indian	45 (8.1)	
Others	13 (2.3)	
Educational level		
Primary	2 (0.4)	
Form3	6 (1.1)	
Form5	87 (15.6)	
Form6	15 (2.7)	
Diploma	243 (43.6)	
Bachelor	182 (32.7)	
Masters and above	22 (3.9)	
Occupation		
Specialist/ consultant	6 (1.1)	
Medical officer	89 (16.0)	
Housemanship officer	54 (9.7)	
Medical assistant	69 (12.4)	
Supervisor medical assistant	5 (0.9)	
Staff nurse	104 (18.7)	
Sister/matron	9 (1.6)	
Community nurse	24 (4.3)	
Ambulance drivers	16 (2.9)	
Health attendants	52 (9.3)	
Clerk/ administrator	48 (8.6)	
Science officer	12 (2.2)	
Medical lab technician	24 (4.3)	
Pharmacist	38 (6.8)	
Radiographer	4 (0.7)	
Physiotherapist	3 (0.5)	

CONTINUE

Table I: Background characteristics of the respondents (N=557). (CONT.)

Variables	Frequency (%)	Median (IQR)
Working experience (year)		8 (10)
<5 years	191 (34.3)	
5-9 years	145 (26.0)	
10-19 years	172 (30.9)	
≥20 years	49 (8.8)	
Behavioural intention towards WPV reporting		4.67 (1.33)
Low (below 4.67)	309 (55.5)	
High (4.67 and above)	248 (44.5)	
Behavioural attitude towards WPV reporting		99.25 (52.63)
Low (below 99.25)	276 (49.6)	
High (99.25 and above)	281 (50.4)	
Subjective norm towards WPV reporting		41.71 (44.32)
Low (below 41.71)	280 (50.3)	
High (41.71 and above)	277 (49.7)	
WPV reporting		
Yes	177 (31.8)	
Physical	20 (76.9)	
Psychological	113 (25.3)	
Both	44 (57.6)	
No	380 (68.2)	
Physical	6 (23.1)	
Psychological	334 (74.7)	
Both	44 (52.4)	

IQR – interquartile range
PBC – Perceived behavioural control
WPV – Workplace violence.

In terms of WPV data, almost all WPV incidents were in the form of psychological violence (80.3%), followed by a combination of both physical and psychological violence (15.1%), with physical violence alone being the least common (4.7%). Almost half of the WPV incidents were perpetrated by patients or clients (44.7%), nearly a fifth (18.3%) by relatives of patients or clients, 16.9% by other staff members, and 10.4% by multiple perpetrators simultaneously. The majority of respondents (52.6%) perceived that the violent acts were intentional on the part of the perpetrators.

The association between workplace factors, types of violence, perpetrator identity, perceived perpetrator intention, and the reporting of WPV was examined. Categories were meaningfully combined for analysis; for example, specialists, consultants, medical officers, and housemanship officers were grouped as 'doctors,' while medical assistants, supervisor medical assistants, staff nurses, sisters or matrons, and community nurses were grouped as the 'clinical support group.' Ambulance drivers, health attendants, administration staff or clerks, science officers, medical lab technicians, pharmacists, radiographers, and physiotherapists were grouped as the 'non-clinical support group.' Another variable was race or ethnicity, where Chinese, Indian, and others were grouped together as 'non-Malay,' while Malay was retained as a separate category. The perpetrator of the WPV was also recategorised into 'public,' 'patient or client (and their relatives),' and 'staff' to produce more meaningful statistical results. These new combinations were deemed more appropriate for statistical analysis.

The Chi-square test revealed significant associations between several factors and the reporting of workplace violence: age (χ^2=7.911, df=3, p=0.048), educational level (χ^2=6.336, df=1, p=0.012), occupation (χ^2=22.958, df=2, p<0.001), working experience (χ^2=19.481, df=3, p<0.001), types of violence (χ^2=49.597, df=2, p<0.001), perpetrator identity (χ^2=6.818, df=2, p=0.033), and perceived perpetrator intention (χ^2=107.509, df=1, p<0.001).

Additionally, the association between the TPB constructs and the reporting of workplace violence was examined. The Chi-square test showed significant associations with workplace violence reporting for behavioural intention (χ^2=23.887, df=1, p<0.001), behavioural attitude (χ^2=24.519, df=1, p<0.001), subjective norm (χ^2=44.076, df=1, p<0.001), and perceived behavioural control (PBC) (χ^2=52.712, df=1, p<0.001).

Multiple logistic regression subsequently was conducted to determine the predictors of reporting of workplace violence among public hospital healthcare workers in Melaka. Only ten variables were included in the preliminary model based on the findings from simple logistic regression test that have p<0.25 which were behavioural intention, behavioural attitude, subjective norm, and PBC towards reporting of WPV, age, educational level, occupation, working experience, type of WPV, and perceived perpetrator's intention. The level of 0.25 was used as it would reduce the probability of missing out important variables that usually occurred when using the traditional level of 0.05. The independent variables that were not included in the multivariate analysis were race/ ethnicity and gender (insignificant p-value in Chi-square test) and perpetrator's identity (p>0.25 during simple logistic regression).

The five significant variables in multiple logistic regression were subjective norm, and PBC towards reporting of WPV, occupation, type of WPV, and perceived perpetrator's intention as described in Table II. Higher likelihood to report WPVs were found among those with high subjective norms (AOR= 2.160, 95% CI 1.32-3.53, p=0.002) and PBC (AOR= 3.976, 95% CI 2.41-6.55, p<0.001), as well as clinical (AOR=2.679, 95% CI 1.43-5.02, p=0.002) and non-clinical (AOR=4.271, 95% CI 2.23 -8.18, p<0.001) support staffs compared to doctors. As for the type of WPV, physical, both types (physical and psychological) and those who perceived the WPV was done intentionally had 13 (AOR=13.157, 95% CI 3.83 -45.24, p<0.001), 2.0 (AOR=2.029 95% CI 1.13-3.65, p=0.018) and 11 (AOR=11.111, 95% CI 6.50-19.00, p<0.001) times more likelihood to report WPV compared to otherwise.

Table II : Predictors of reporting of workplace violence (WPV) among public hospital healthcare workers in Melaka.

Variable	Multiple Logistic Regression				
	B	Adjusted OR (AOR)	P value	95% CI	
				Lower	Upper
Intercept	-4.673	0.009	<0.001		
Subjective norm towards reporting of WPV					
Low		1.0			
High	0.770	2.160	0.002*	1.32	3.53
Perceived behavioural control towards reporting of WPV					
Low		1.0			
High	1.380	3.976	<0.001*	2.41	6.55
Occupation					
Doctors		1.0			
Clinical support group	0.986	2.679	0.002*	1.43	5.02
Non-clinical support group	1.452	4.271	<0.001*	2.23	8.18
Type of WPV					
Psychological		1.0			
Physical	2.577	13.157	<0.001*	3.83	45.24
Both	0.708	2.029	0.018*	1.13	3.65
Perceived perpetrator's intention					
Unintentional		1.0			
Intentional	2.408	11.111	<0.001*	6.50	19.00

*Significant at p <0.05
B = Regression coefficient.
Forward LR was applied.
Multicollinearity and interaction terms were checked.
Hosmer and Lemeshow test (p=0.922), classification table (overall percentage 81.0%), Cox and Snell R squared (0.340), Nagelkerke R squared (0.476), ROC=0.869.

Qualitative findings

A total of 11 HCWs participated in the in-depth interviews. The sociodemographic details of the informants are provided in Table III. The informants' ages ranged from 26 to 44 years, with the majority aged between 30 and 39 years (54.5%). Eight of the informants were female (72.7%), and most were Malay (72.7%). Most of them worked as doctors (54.5%) and had more than 10 years of work experience (54.5%). To maintain confidentiality, pseudonyms using alphabets were assigned to each informant. The transcripts were initially undergoing inductive thematic analysis to ensure all potential coding were successfully identified. Table IV displays the coding generated from each informant. No new codes were identified after the ninth respondent. However, to confirm that the saturation point of information had truly been reached, the researcher recruited two additional informants: the tenth and eleventh participants. Code saturation is typically assessed periodically to decide when data collection can be reasonably concluded. Code saturation was determined to have been achieved by assessing the code identification, code prevalence, and codebook stability. In this research, it has been established that code saturation was achieved during

the ninth interview (Informant I). This determination is grounded in the combination of factors, including complete code identification (100% of codes were identified), complete high-prevalence code identification (100% of high-prevalence codes were identified), and stable codebook definitions (100% of code definition changes had been made). Deductive thematic analysis was conducted thereafter to categorise the coding according to the pre-determined themes which are the constructs of the TPB. Three themes emerged which are perceived norms, process barriers and attitude/ belief as elaborated in Table V.

Table III: Socio-demographic characteristics of interview informants

No	Informant	Age (years)	Gender	Ethnicity	Occupation	Working experience (years)
1	A	33	Female	Malay	Doctor	9
2	B	26	Female	Malay	Doctor (HO)	2
3	C	40	Female	Indian	Doctor	14
4	D	32	Male	Malay	Doctor	8
5	E	39	Female	Malay	Doctor	15
6	F	31	Female	Malay	Staff Nurse	8
7	G	41	Female	Malay	Community Nurse	16
8	H	36	Female	Malay	Pharmacist	12
9	I	32	Male	Indian	Medical Assistant	7
10	J	44	Female	Malay	Staff nurse	19
11	K	40	Male	Chinese	Doctor (Specialist)	16

HO = House Officer

Table IV: Summary of codes generated from interview informants

Informants	Coding (total/old/new)	Cumulative coding
A	3/0/3	3
B	4/3/1	4
C	3/2/1	5
D	5/4/1	6
E	4/3/1	7
F	4/3/1	8
G	3/2/1	9
H	5/4/1	10
I	4/3/1	11
J	6/6/0	11
K	5/5/0	11

Table V : Summary of qualitative data analysis for factors contributing towards underreporting of workplace violence among the HCWs.

Themes	Coding
Perceived norms	• Part of the job/ Reporting is not a norm/ Wanting to be or feel accepted in workplace. • Clients are always right

CONTINUE

Table V : Summary of qualitative data analysis for factors contributing towards underreporting of workplace violence among the HCWs. (CONT.)

Themes	Coding
Process barriers	• Time consuming/ Disruption of healthcare provision • Lack of confidentiality: Feeling ashamed - People will know your story. • Poor organizational support: Outcome of reporting not as expected/ No action taken/ waste of time/ useless. • Ambiguity of WPV needed to be reported/ Lack of awareness/ Unsure of process. • Need evidence for report to be accepted.
Attitude/ Beliefs	• Afraid of the negative consequences of reporting • "Stigma of reporting" when it involves colleague: Affecting relationship/ Feeling guilty. • A belief that the incident was not serious enough to report/ No need to report unless physically affected.

Theme 1: Perceived norms

Four coding were identified under this theme: "part of the job", "reporting is not a norm", "wanting to be or feel accepted", and the perception that "clients are always right". The majority of informants mistakenly believed that WPV in healthcare is "part of the job", reflecting its frequent occurrence and the potential lack of support for reporting, which will be further elaborated under the process barrier theme. As Informant C, a 40-year-old doctor, stated, "[After] all, you get used to the usual mild verbal abuse here and there, not worthy of reporting it. Usually, if it is a minor one, I don't report it. Isn't it a norm nowadays?"

Furthermore, those who report WPV are often seen as outliers or going against the norm, with a high likelihood of being marginalised. As a result, some informants felt that underreporting was necessary to fit in and be accepted by their colleagues. For example, Informant B, a 26-year-old horsemanship officer, stated, "I fear being alienated by friends, colleagues, and superiors. Maybe I could be labelled as a whistleblower."

A few informants also mistakenly applied the "clients are always right" motto to WPV, which indirectly influenced their decision not to report violence committed by clients.

Theme 2: Process barriers

Five coding emerged under this theme, primarily related to managing the reporting process. These include time-consuming procedures, lack of confidentiality, poor organisational support, and the availability of evidence. One coding related to the victim's awareness and knowledge of the reporting procedure whereby some were unaware of the reporting procedure and the types of WPV that could be reported, especially among new staff members.

The majority of informants expressed frustration with the tedious process involved in reporting WPV, which they felt could disrupt healthcare provision. Informant D, a 32-year-old doctor, stated, 'It takes a lot of time, you know, gathering the evidence, making a police report, seeing your supervisors. And you know how we [doctors] have a lot of things to do; it's not like we just sit around during our shifts. Time would probably be spent just filling up forms!'

Additionally, poor support from superiors and the lack of confidentiality in the reporting and management process further discourage victims from reporting. Presenting valid evidence is another barrier, as non-physical WPV, such as verbal abuse, often leaves no visible evidence.

Theme 3: Attitude/ beliefs

Themes related to the attitudes and beliefs of the informants frequently emerged during the transcript analysis. Several informants expressed a fear of reporting WPV due to potential negative consequences, which made them hesitant to report. One informant, a 36-year-old pharmacist, mentioned that reporting would affect her mental well-being, stating, "When we report this, we are prone to keep on thinking about the incident again and again." Another informant, a 31-year-old staff nurse, shared concerns about being blamed by supervisors or the possibility of the patient escalating the issue outside of working hours, saying, "It is likely that we will be blamed [by the supervisor]... or the patient might take the issue outside of work, at any time."

The stigma associated with reporting WPV committed by colleagues also emerged as a significant barrier, leading to feelings of guilt and potentially disrupting relationships. As Informant B, a 26-year-old housemanship officer, explained, "I would also feel guilty because it might have started due to my own mistakes... reporting the event will just make the feeling worse." Additionally, some informants held the false belief that incidents are not serious unless physical involvement is present.

Integration of Quantitative and Qualitative Findings

The integrated analysis also showed comparable findings between the quantitative and qualitative results, except for none of the coding and themes emerged were comparable to the perceived perpetrator's intention. Table VI shows the joint display summarising the integrated findings, with subjective norms towards reporting WPV and occupation are categorised under the perceived norm's theme, indicating certain scope of jobs tend to perceive WPV as norms. The inter-relations between the themes and predictors are illustrated in Fig. 1. Perceived behavioural control was mainly related to process barriers that increase the probability of not reporting WPVs.

Table VI: Joint display of quantitative, qualitative, and mixed methods meta inferences of workplace violence among public hospital healthcare workers in Melaka.

Quantitative study		Qualitative study		Remarks/ comparison
Predictors of reporting of WPV	**Findings**	**Theme**	**Coding**	
Subjective norms towards reporting of WPV	Respondents that have high subjective norm scores towards reporting of WPV have 2.2 times more likely to report WPV compared to those who have low subjective norm scores.	Perceived norms	▪ Part of the job/ ▪ Reporting is not a norm/ Wanting to be or feel accepted in workplace. ▪ Clients are always right.	Comparable
Occupation	Respondents who work as a clinical support group and non-clinical support group were 2.8 and 4.3 times more likely to report WPV respectively compared to those who work as doctors.			
Perceived behavioural controls towards reporting of WPV.	Respondents with high scores were four times more likely to report WPV compared to those with low scores.	Process barriers	▪ Time consuming/ Disruption of healthcare provision ▪ Lack of confidentiality: Feeling ashamed - People will know your story. ▪ Poor organizational support: Outcome of reporting not as expected/ No action taken/ waste of time/ useless. ▪ Ambiguity of WPV needed to be reported/ Lack of awareness/ Unsure of process. ▪ Need evidence for report to be accepted.	Comparable
Type of WPV	Those who experienced physical and both types of WPV were 13 and two times more likely to report WPV compared to those who experienced psychological WPV respectively.	Attitude/ beliefs	▪A belief that the incident was not serious enough to report/ No need to report unless physically affected. ▪Afraid of the negative consequences of reporting	Comparable
Perceived perpetrator's intention	Those that perceived the WPV as intentionally inflicted by the perpetrator have 11 times more likely to report the WPV compared to those who perceived it as unintentional.	-	-	-

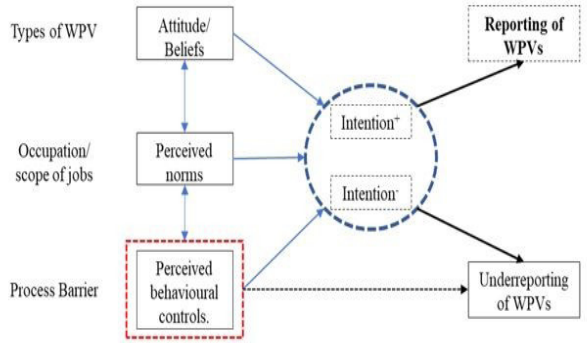

Fig. 1: Inter-relationship between the themes and predictors according to the constructs of TPB.

Subjective Norms towards Reporting, Occupation and Perceived Norms

The quantitative study results showed that a high subjective norm towards reporting WPV is a significant predictor that respondents will act in favour of reporting WPV. This finding aligns with the qualitative data, where interviews with informants revealed themes and codings related to perceived norms influencing the underreporting of WPV. The theme and coding indicated that when the prevailing belief among HCWs is that WPV is simply "part of the job" and that reporting is unnecessary, they are more likely to underreport WPV.

Another predictor for reporting WPV identified in the quantitative study was occupation. Respondents working in clinical and non-clinical support roles were found to be more likely to report WPV compared to doctors. In contrast, during qualitative interviews, doctors expressed reluctance to report WPV, which they attributed to a belief that they should be capable of handling such incidents on their own and that reporting might be perceived as a sign of weakness.

PBC towards Reporting and Process Barriers

Perceived behavioural control towards reporting WPV was found to be a significant predictor of reporting behaviour among respondents. Those with high PBC were more likely to engage in actual reporting. Complementary findings emerged from the qualitative study, where PBC towards underreporting WPV was identified as a theme among informants who underreported incidents. This theme revealed that informants who lacked the control and skills necessary to report WPV were more likely to underreport these incidents.

Type of WPV and Attitude/ Beliefs

Type of WPV experienced by the respondents can also predict whether the HCW report the incident or not. Quantitative result showed that those who experienced physical and both types of WPV were more likely to report WPV compared to those who experienced psychological WPV. Complementary findings were also noted in the qualitative study among the underreported informants. The demanding work schedules of healthcare workers can result in the underreporting of "less serious" WPV incidents, especially those involving verbal or nonphysical abuse. HCWs' attitudes and beliefs about WPV are strongly influenced by their perceived norms surrounding violent incidents. The prevalence of these incidents, combined with factors like organisational support and the potential negative repercussions of reporting, often leads to ignoring incidents unless they involve physical harm.

DISCUSSION

Despite being a recognised hazard in the healthcare industry, reporting of WPVs remains a significant challenge among the HCWs. The findings of this study reflect three main factors served as barriers towards reporting of WPVs, which are the attitude on beliefs of the HCWs towards reporting of WPV, their perceived norms towards WPV and HCWs' perceived behavioural controls which are mainly related to process barriers, which eventually hinder them from reporting the incidents. These factors are not uncommon but have been repeatedly reported in many previous related studies involving HCWs, particularly among nurses and those working in the emergency department.

Perceiving WPVs as part of norms or scope of the jobs in the healthcare industry has been one of the most common and significant barrier to reporting WPVs ((30–32). Increase exposure to violence has been linked to reduced reporting behaviour, due to the perception that WPV is a routine and norms (31). Numerous studies related to WPV among HCWs were conducted among nurses. Apart from the misperception that violence as "part of the job" (31), the incidents have a mild impact and not sufficiently serious (30,33), with non-physical violence is reported less often than physical violence (30), the belief that reporting would not lead to any positive changes, with no preventative measures were enforced (6,30), lack of awareness of reporting methods, mechanisms (34) and types of violence to report (31,34), as well as clear policies and procedures (30), time consuming reporting procedures (30), lack of supervisory or coworker support, fear of blame, fear of losing one's job, no encouragement to report, and heavy workload (13,30,34). Violence was perceived by the nurses as the presence of physical injury which usually sustained from a violent incident and will not be reported if ''no-one was hurt'' or the violence was ''not hard'' enough to cause a physical injury (30).

Occupation emerged as a significant predictor of reporting WPV in this research. Respondents in clinical and non-clinical support roles were more likely to report WPV compared to doctors, and in contrast, was supported by qualitative data, particularly under the theme of perceived norms towards underreporting WPV. During interviews, it was observed that doctors often felt scrutinised by their subordinates due to their perceived status as being "at the top" of the hierarchical

structure. As a result, they often viewed reporting WPV as outside the norm for their role. This aligns with other studies which found that doctors were less likely than nurses to report physical WPV (35), and that nurses and other staff had statistically higher rates of reporting WPV compared to doctors (30). Doctors may feel ashamed of reporting these incidents, seeing them as trivial compared to the patient's deteriorating health status (36). A qualitative study also revealed that doctors often perceive themselves as holding a top hierarchical status and deserving of respect from patients, colleagues, and the public (37). This mindset likely influences their actions, leading them to avoid reporting WPV, as it may be perceived as a sign of weakness or an inability to handle the situation.

Perceived behavioural control towards reporting WPV emerged as a predictor and was also supported by qualitative data under the theme of process barriers. These findings align with other literature, which has shown a significant positive correlation between PBC and the intention to report WPV. A higher intention to report WPV is subsequently associated with higher actual reporting rates compared to lower intentions (12). Similar research on crime reporting also found a significant association between PBC and the likelihood of reporting crimes (38). Many studies indicate that increased PBC enhances the likelihood of performing behaviours in general, and preventive behaviours in particular (39,40).

Regarding process barriers, both quantitative and qualitative studies identified the perception of a difficult and time-consuming reporting system as a major barrier to reporting WPV (30,31,41). This empirical evidence underscores the importance of PBC, as it directly influences motivation and action, and impacts other determinants. PBC is so critical that it was incorporated into the TPB, extending the Theory of Reasoned Action. Although the Theory of Reasoned Action explained a significant portion of behavioural variance, it was insufficient to account for all systematic variance (42).

Although perceived perpetrators intention was not emerged in the qualitative analysis, previous studies indicated that underreporting of WPV been linked with the perceptions that the aggressive behaviour may unintentional and related to certain illnesses such as dementia, confusion, or disorientation (4,33). Additionally, this study revealed that the non-clinical and clinical support staff were more likely to report WPV compared to the clinical HCWs who are directly involved with patients and the family members. WPV has been reported four times more likelihood to occur at the hospital (43), particularly greater in tertiary facilities and urban environments (9), as well as in psychiatric wards and emergency departments (43).

The type of WPV was found to be the strongest predictor toward reporting behaviour in this study, with HCWs experiencing physical violence were more likely to report, which were also repeatedly emphasised during the interviews. This can be seen when informants shared their experiences where their higher-ups dismissed their concern regarding WPV as “not serious enough” and that HCW “should be more patient”, together with the attitude of “the client is always right”. An informant shared that due to difficulty in gathering evidence for verbal abuse, she decided not to report the incident. She further stated that physical WPV were easier to be reported as evidence can be easily shown if “you get hurt physically by your clients”. Repeated encounters with violence, particularly to mild type of violence and non-physical type of violence, as well as no action taken upon reporting may diminish emotional responsiveness and cause emotional desensitisation. Desensitisation to violence is a form of habituation and a well-established type of non-associative learning, resulting in reduced response to stimulus despite repetitive exposure (44), and is associated with increased risk for subsequent violent behaviour (45). The repeated exposure will not only cause desensitisation through negative emotional, cognitive and physiological reactions to violence, but also will increase aggressive behaviour (45).

These findings were consistent with other previous studies that stated that less reporting occurred for psychological WPV compared to physical violence (16,46,47). One of the reasons for underreporting is the assessment of the seriousness of HCW about the violence they have suffered. HCW may treat less-severe psychological violence (such as light verbal abuse) as part of the job and will not report such incidents (12). Qualitative results from previous mixed-method study also reveals that HCW were expected to tolerate violence to a certain level and were not supposed to report all violence (48). This will perpetuate the perception that mild and non-physically injuring behaviour tend not to be considered as “violence” and needed to be tolerated by HCW as it is expected and unavoidable. This dangerous misconception should be intervened early as to discourage even more rampant extreme WPV from happening as stipulates by the “broken window” theory. This theory suggested that apathy toward low-level crimes creates a neighbourhood conducive to more serious crime, which also applies to WPV. When verbal abuse and low-level battery are tolerated, more serious forms of violence are invited.

Undoubtedly, WPV in health care settings is a very destructive phenomenon, causing decreased motivation to work and productivity as well as resulting in high costs to the organisation (49). It is unfortunate that despite being highly preventable through the implementation of effective policy, WPV against HCWs continues to rise.

Strengths and Limitations

The present study had several notable strengths that

contributed to the validity and impact of the results. Firstly, the choice of a mixed-method study design was a strength as it allowed for a comprehensive exploration of the reporting and underreporting of WPV among HCWs. The quantitative aspect, employing probability sampling, offered objective measures and a broad overview of the issue, while the qualitative component delved into the detailed experiences and barriers faced by HCWs. The integration of both datasets strengthened the overall understanding of the issue. The statistical analysis in the quantitative study identified predictors for WPV reporting, and the themes from the qualitative study provided a deeper insight into these predictors, facilitating improvements in current intervention programs.

Secondly, the adoption of the TPB as the guiding model added scholarly rigor to the research. This approach not only enhanced the understanding of the issue but also provided a foundation for developing theory-based interventions.

Furthermore, the use of a locally developed, validated, and reliable questionnaire ensured the collection of quality data that was culturally appropriate for the study population. Lastly, the inclusion of a diverse range of participants in terms of occupation, ethnicity, age, and sociodemographic backgrounds, coupled with a high response rate, enriched the findings by capturing a broad spectrum of perspectives on the phenomenon under investigation.

This research is not without limitations. The establishment of causal or temporal relationship is restricted, requiring caution in drawing conclusions due to the use of a cross-sectional study design. Furthermore, this study is subject to potential limitations, particularly recall bias and social desirability bias, which are inherent in self-reported data. Recall bias may have occurred since the data relied on the respondents' ability to accurately remember and honestly report their behaviour regarding incident reporting over the past 12 months prior to data collection. This reliance on memory could lead to either underreporting or overreporting of events. Additionally, the use of a self-administered questionnaire introduces the risk of social desirability bias, where respondents might have provided answers that they believe are more socially acceptable or favourable rather than reflecting their true actions. For example, prior research comparing self-reports and actual documentation of hospital incidents found that 23% of respondents claimed to have self-reported violent events, when in fact only 4% had done so, and additionally, while 77% of respondents claimed that they did not report the workplace violence (WPV), 9% of them actually had (4). This discrepancy highlights the potential gap between self-reported behaviour and actual behaviour, which could influence the accuracy of the findings in this study. Future research should consider using triangulated methods, such as cross-referencing self-reports with actual records or incorporating anonymous reporting mechanisms, to mitigate these biases and enhance data reliability.

Regarding the qualitative aspect of this study, the utilisation of convenient sampling for informant selection posed a limitation, as it restricted the generalisability of findings to other healthcare workers HCWs. However, the intention of this research was not to generate national or generalisable inferences but to provide valuable baseline insights and scientific evidence on the issue, to assist the stakeholders and relevant authorities in planning for effective strategies and policies, as well as future related research. Another noteworthy limitation pertains to the challenges encountered during interviews with HCWs regarding Workplace Violence (WPV). These discussions touched upon sensitive topics such as sexual WPV, power dynamics, and workplace culture. Consequently, there exists a possibility that some information may not have been fully disclosed by the informants. Despite this challenge, it is essential to highlight that information derived from all the interviews successfully attained thematic saturation and subsequently provided a rich description of their experiences and challenges faced pertaining to the topic being researched.

Future Research Directions

Future research should employ objective measurements of the WPV and reporting behaviour, through the observation of videos or triangulation with official documentation. By doing so, the accuracy of the response bias can be reduced, and results can be enhanced. Furthermore, a larger sample size and the inclusion of various healthcare professions in different settings, such as HCWs in health clinics, district health offices, and private sectors, could offer wider understanding and valuable insights into the issue related to WPV reporting behaviour among these diverse populations.

A different study design that can accurately measure the cause-and-effect relationships between the variables should be considered for future study. Researchers are also encouraged to explore alternative theories or models that can potentially produce a stronger model.

Prevention and Policy Implications

This research has brought to light several crucial findings that can serve as the foundation for developing both short-term and long-term plans aimed at reducing the underreporting of WPV among Malaysian HCWs.

In the short-term approach, given that doctors emerged as a high-risk group that failed to report WPV in this study, intervention program should be initiated to correct the potential misperception that WPV is part of the job, conducted periodically. It is also recommended that junior or recently graduated doctors receive briefings on the overall WPV issue among HCW, emphasising the

importance of reporting WPV and providing insights into the WPV reporting process.

Furthermore, the study underscores the significance of subjective norms and PBC in influencing WPV reporting behaviour. While the quantitative study identified five predictors indirectly linked through the victims' perceptions and self-belief, it is essential to recognise that one's perception can be shaped by sociodemographic background and surrounding beliefs. Therefore, health education initiatives, such as CME sessions on WPV, courses, and training to familiarise HCWs with the WPV guidelines by the Ministry of Health (MOH), should be more frequently implemented. These initiatives aim to enhance their resources, skills, and capabilities while dispelling false perceptions of WPV as part of their job responsibilities. WPV-related topics and training should be mandatory components of orientation modules and materials for newly employed HCWs. Additionally, theory-based interventions, particularly those utilising the TPB, should be developed in collaboration with subject matter experts, including specialists in human psychology and behaviour, WPV experts, academicians, and individuals working at the grassroots level. The goal is to reshape the perceptions of HCWs regarding WPV, enhance their confidence in overcoming barriers, and ultimately influence not only their behaviour but also that of those in their immediate vicinity.

For the long-term approach, the normalisation of WPV reporting should be the overarching goal, and interventions should be directed, particularly towards higher-position HCW, such as doctors and supervisors. Focusing on these influential figures is strategic given the apprentice-type nature of healthcare professions, where the modelling of senior staff significantly shapes attitudes and behaviour (50).

An essential component of the long-term strategy involves reinforcing the WPV policy, making it a pivotal part of stakeholders' key performance indices. Strengthening the policy implementation can contribute to the normalisation of WPV reporting, and the commitment and support from higher-position stakeholders are vital in fostering the correct perception of WPV among HCWs. This, in turn, positively influences their WPV reporting behaviour.

Furthermore, establishing a neutral third party to investigate WPV reports can alleviate the fear of repercussions for those who decide to report violent incidents. This step can mitigate concerns about reprimands, blame, alienation, or being labelled as a whistleblower. Additionally, providing a channel for victimised higher-position HCWs to confidentially relay their personal WPV experiences can significantly enhance reporting behaviour among this group. This approach creates a safer and more supportive environment for individuals to come forward and report WPV incidents without fear of negative consequences.

CONCLUSION

The findings of this study consistently highlight common factors acting as persistent barriers to the reporting of WPV among HCWs. These factors include perceived norms towards WPVs in the healthcare sector, the misconception that only severely inflicted violence should be reported, and perceived behaviour control towards reporting WPVs. To effectively address workplace violence, a comprehensive and collaborative approach is essential, with shared responsibilities at all levels. The establishment of a zero-tolerance policy towards WPV is crucial, accompanied by a well-written and effectively implemented Workplace Violence Prevention Program. This program should integrate engineering controls, administrative controls, and training measures to reduce the incidence of workplace violence. It is imperative that every worker, irrespective of their level and scope of responsibilities, is made aware of the existence of such a policy. Workers should understand both the content and context of the policy, recognising that all claims of workplace violence will be promptly investigated and remedied. This approach ensures a clear and consistent stance against workplace violence, promoting a safer and more secure environment for all employees.

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