Ward Nurses' Encounter with Workplace Violence: A Descriptive Survey of Nurses' Responses and Reported Well-Being

A dissertation presented to the Faculty of Health Sciences in part-fulfilment of the requirements for the Degree of Master of Science in Nursing at the University of Malta

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FACULTY/~~INSTITUTE/CENTRE/SCHOOL~~ Health Sciences

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ABSTRACT

Background: Nurses are described as being the most at risk of encountering workplace violence (WPV) (Hahn et al., 2010). Literature has shown that nurses' exposure to WPV has accounted for adverse impacts on their well-being (Mroczek et al., 2014; Jakobsson et al., 2020; Vento et al., 2020). Crabbe et al. (2002) illustrated that nurses tend to refrain from reporting WPV, consequently leading to unawareness amongst authorities about the severity of this phenomenon. Gillespie et al. (2010) discussed the importance of identifying risk factors which contribute to WPV, so that these can form the basis upon which strategies to mitigate its occurrence are devised. This study aims to investigate the prevalence of, and response to WPV in local hospital wards, and how WPV from patients and/or relatives, affect nurses' well-being. The 'Interactive Model of Workplace Violence' (Chappell & DiMartino, 1998), and the 'Theory of Planned Behaviour' (Ajzen, 1991) were used to guide this research.

Methodology: A quantitative, descriptive cross-sectional survey design was employed. Each of the 426 nurses working in adult wards in the local hospital was handed a slightly amended version of the 'Questionnaire to Evaluate Workplace Violence in Healthcare Settings (Kumari et al., 2021). Data was analysed through SPSS-28.

Findings: The response rate was 67% (n=284). The majority of nurses (89%) indicated having experienced one or both forms of WPV. Nurses of a young age, lacking experience and working on a mixed shift type reported higher encounters of WPV. Characteristics of perpetrators and hospital environment were perceived as very important risk factors for WPV amongst nurses. The majority of nurses (58.9%) demonstrated underreporting as a response to WPV. Adverse impacts on nurses'

psychological well-being and feelings towards workplace were found to significantly correlate with WPV. Mitigation strategies which addressed risk factors of WPV were all perceived as very useful by respondents as lessening the occurrence of WPV.

Conclusion: Recommendations include the need for greater awareness of WPV by management, nurses and the general public. Policies which assert legislative measures towards public against WPV should be developed and implemented.

Keywords: NURSES, WORKPLACE VIOLENCE, PATIENTS, RELATIVES, HOSPITAL WARDS, RESPOND, WELL-BEING, PREVALENCE

DEDICATION

To my beloved late Aunt Dorothy who was a great inspiration for the completion of this dissertation

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ABBREVIATIONS

AXIS	Appraisal tool for Cross-Sectional Studies
CI	Confidence Interval
CN(s)	Charge Nurse(s)
CVI	Content Validity Index
CVR	Content Validity Ratio
DPO	Data Protection Officer
EFA	Exploratory Factor Analysis
EBSCO	Elton Bryson Stephens Company
EN(s)	Enrolled Nurse(s)
FREC	Faculty of Health Sciences Research Ethics Committee
HyDi	Hybrid Discovery
M	Means
MeSH	Medical Subject Heading
OSHA	Occupational Safety and Health Administration
p-value	Probability value
PEO	Population, Exposure, Outcome
PMC	PubMed Central
PRISMA	Preferred Reporting Items for Systematic Reviews and Meta-Analysis
PTSD	Post-traumatic stress disorder
SD	Standard deviations
SN(s)	Staff Nurse(s)
SPSS-28	Statistical Package for the Social Sciences Version 28
SSN(s)	Senior Staff Nurse(s)
UoM	University of Malta
WHO	World Health Organisation
WPV	Workplace violence
x^2	Chi-squared

Chapter 1

Introduction

1.0 Introduction

Workplace violence (WPV) is defined as an incident where the safety and well-being of staff is challenged through abuse, threats, or assault in the workplace (Liu et al., 2019). Healthcare professionals are at a high risk of experiencing WPV, representing up to a quarter of the violence occurring among different workplaces worldwide (Shahjalal et al., 2021). According to Hahn et al. (2010), the nursing profession is reported as being the most at risk of WPV within the healthcare sector. This study investigates nurses' responses and reported well-being when encountering ward-based WPV, along with its prevalence in the local context.

1.1 Background to the study

Kumari et al. (2021) identified physical and verbal abuse as being the most predominant types of violence occurring in the healthcare sector. Celik et al. (2007) described verbal abuse as incidents where one is threatened, shouted at, yelled at, cursed at or sworn at in a hostile, disrespectful and inappropriate manner, resulting in belittling, intimidation, humiliation and/or possible discrimination. Jakobsson et al. (2020) defined physical violence as being beaten, slapped, thrashed, kicked, pinched, scratched, spitted at, and attacked. WPV can be classified as internal or external; internal WPV occurs within an organisation whilst external WPV is initiated by individuals outside an organisation (Reemst & Fischer, 2019). In a systematic review addressing patient and visitor violence encountered by nurses working in general hospitals worldwide, Hahn et al. (2008) demonstrated that there was a higher occurrence of external, rather than internal WPV in hospital wards; and identified patients and their relatives as the main perpetrators of WPV towards nurses.

Faghihi et al. (2021) estimated the incidence of verbal and physical WPV towards nurses in healthcare settings worldwide to be 90% and 56% respectively.

This indicates that nearly all nurses experience verbal abuse, whilst more than half suffer some form of physical abuse. However, the actual prevalence of WPV may be much higher since Kumari et al. (2021) found that many WPV incidents go unreported by nurses. Odes et al. (2020) highlighted that nurses working in hospital wards were more likely to be physically injured by patients than those working in settings which are traditionally considered as being at higher risks, such as psychiatric and emergency settings. Moreover, Jakobsson et al. (2020) asserted that this higher risk of exposure of ward nurses to WPV, results from the longer hospital stays of patients and/or relatives in hospital wards as opposed to the settings afore mentioned.

Gillespie et al. (2010) emphasised the importance of identifying risk factors which contribute to WPV, and mitigation strategies to reduce its occurrence. The author mustered the risk factors of WPV from various studies addressing WPV in healthcare. These factors (Table 1.1), which are mostly out of the nurses' control, were associated with characteristics inherent to nurses and perpetrators, as well as with environmental/situational factors. El-Gilany et al. (2010) discussed how awareness of risk factors helped nurses predict forthcoming WPV. According to Gillespie et al. (2010), the identification of such factors and implementation of strategies to mitigate them, reduced WPV and managed negative impacts left on nurses following aggressive events.

Table 1.1

Reported risk factors associated with increased WPV (Gillespie et al., 2010)

		Determinants of WPV
Nurses' characteristics	Gender	*Evidence was contradictory in determining whether gender poses risks for WPV; however, the article discussed that the majority of researchers have reported that men are more prone to encountering physical and verbal WPV than women.*
	Age and years of experience	*A higher prevalence of physical and verbal WPV was reported in younger and inexperienced nurses.*
	Hours worked	*A higher prevalence of physical and verbal WPV reported for nurses working longer hours*
	Shift type	*A higher prevalence of physical and verbal WPV reported for nurses working shifts during the evening and night-time.*
Factors inherent to perpetrator/s	Long waiting times Higher expectations for treatment effects (treatment type not specified) Inability to deal with crisis situations due to lack of control and knowledge.	
Environmental/situational factors	Inadequate security Overcrowding Lack of staff (nurse-patient ratio)	

1.2 Impacts and reporting patterns

Research shows that nurses experiencing WPV might be more prone to long-term psychiatric morbidities and decline in physical health (Table 1.2) (Mroczek et al., 2014; Jackobsson et al., 2020; Vento et al., 2020). According to Chapman et al. (2009) there is a direct correlation between anxiety caused by WPV and physiological problems, with nurses who are exposed to WPV having a higher risk of developing somatic health-related illnesses. These were also associated with increased somatic symptoms, such as chronic fatigue, leading to low work performance, ultimately having an effect on quality of care (Chapman et al., 2009). There are also correlations between WPV towards nurses and job dissatisfaction, staff turnover, resignations and increased absence days (Vento et al., 2020). In addition, Jakobsson et al. (2020) stated that nurses' social and familial relationships become jeopardised due to WPV. The issue of WPV is considered as a major global one, since it imposes long-term effects on nurses' well-being, and also compromises patient care and safety (Chapman et al. 2009).

Table 1.2

Reported impacts on psychological and physiological nurses' well-being secondary to WPV

	Reported impacts on nurses' well-being secondary to WPV
Psychiatric morbidities and psychological trauma *(Mroczek et al., 2014; Jakobsson et al., 2020; Vento et al., 2020)*	Post-traumatic stress disorder (PTSD) Depression Stress Anxiety Fear Increased irritability Increased aggressiveness Low-self esteem Decreased work-confidence
Decline in physical health *(Jakobsson et al., 2020)*	Loss of appetite Increased headaches Gastrointestinal and cardiac problems Insomnia Lowered concentration

Crabbe et al. (2002) described how the empathic and compassionate nature of the nursing profession causes nurses to refrain from reporting. Reporting WPV is perceived as being immoral among nurses because it might distress patients (Sato et al., 2013). According to Kitaneh and Hamdan (2012), due to underreporting, there is lack of evidence of the high prevalence and effects of WPV on nurses' health and well-being. This often results in authorities underestimating the existence of WPV and its effect on nurses, which is demonstrated by lack of managerial support and initiative in developing or improving policies (Sato et al., 2013; Jakobsson et al., 2020).

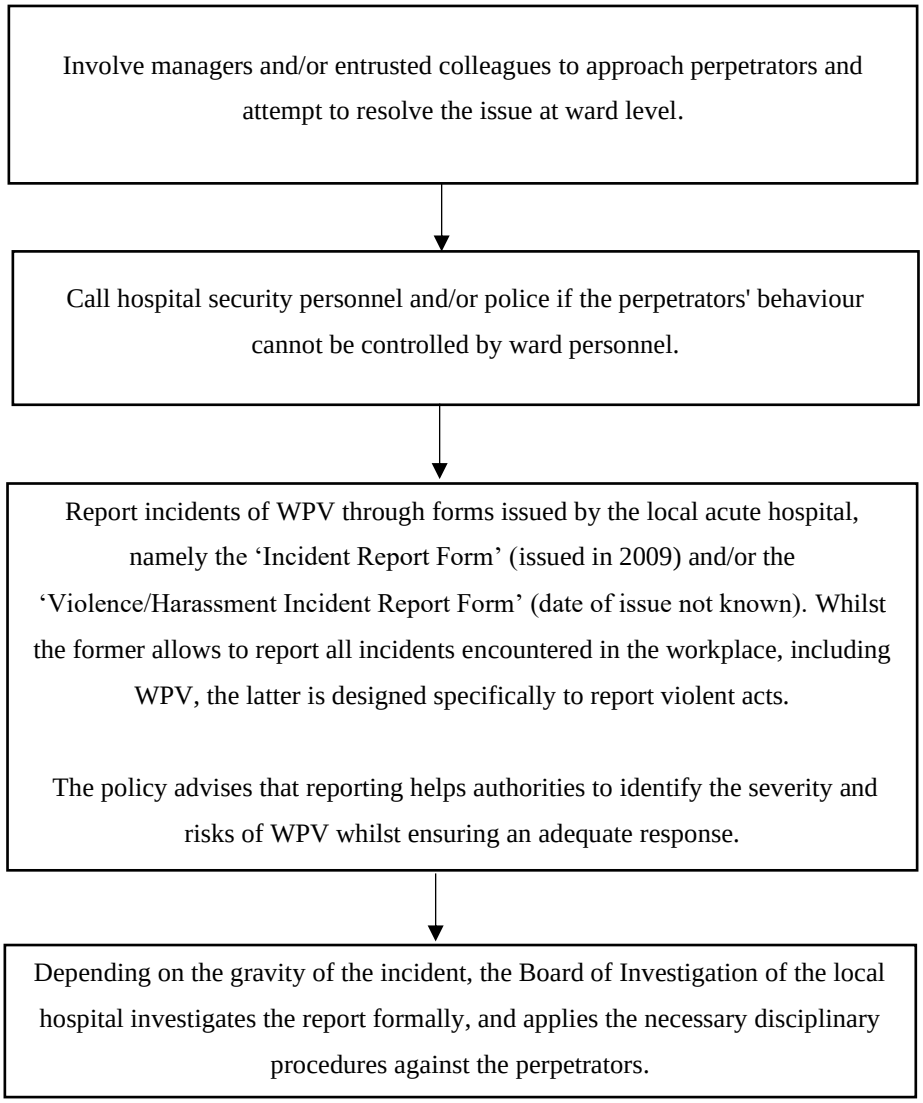
1.3 The local scenario

The local acute hospital offers services to a country with a high population density (Eurostat, 2022a), consequently experiencing a high influx of hospitalised patients on a daily basis. Although visitors in wards are restricted to one per person, hours extend up to seven hours a day. The short distances that need to be travelled to reach hospital may also encourage more visitors. This exposes ward nurses to higher probabilities of WPV, especially if these individuals exhibit violent behaviour. Moreover, locally, nurses work up to 48 hours per week (Dier, 2022). This consequently increases the time available for nurses to care for and be exposed to patients who may have high anxiety levels, be belligerent or confused. The majority of Maltese nurses are aged up to 34 years (Eurostat, 2022b) and work twelve-hour shifts. Gillespie et al. (2010) listed these as risk factors which might potentially place nurses at higher risks of violent incidents.

The local hospital has issued a ‘Hospital Violence Policy’ (last revised in 2011) which addresses actions nurses should take upon encountering WPV. Figure 1.1 summarises this policy.

Figure 1.1

Flow chart of actions to be taken by nurses and hospital management upon witnessing WPV according to 'Hospital Violence Policy'



The author's experience as a nurse, involved witnessing incidents of various kinds of WPV, leading to adverse impacts on individual nurses and the nursing team on the ward. This has led the author to develop an interest in identifying whether local findings reflect international literature.

Research addressing nurses' encounters with WPV in psychiatric settings (Teuma Custo, 2004; Gafa, 2006; Sciberras, 2008; Vella, 2011; Mintoff, 2011) and

in emergency settings (Farrugia, 2002; Lau, 2006) was conducted locally. Yet research directed towards ward-based WPV in the local context is lacking. Official data regarding how ward nurses at the local hospital respond to and are affected by WPV has not been found. However, the nursing management has recently gathered numerical data on the number of ward nurses reporting external WPV through the two reporting forms mentioned. This unpublished data shows that four incidents of WPV from patients/relatives were reported by nurses between October 2022 and March 2023. Of these, three involved verbal WPV, whereas one involved physical WPV (unpublished data gathered informally by management). If four incidents were reported in five months, by extrapolation, the incidence of WPV against ward nurses per year is around ten. These numbers may seem to be small when considering that there are approximately 426 nurses working in local hospital wards (information regarding how this amount was determined shall be discussed in the following chapters), yet incidents may be under-reported.

1.4 Relevance of research topic

Kitaneh and Hamdan (2012) emphasised the importance of addressing the prevalence and potential risk factors of WPV along with reporting patterns and nurses' well-being. Kumari et al. (2021) described the need of identifying mitigation strategies to reduce WPV in healthcare as the 'need of the hour'. Addressing such factors of WPV promotes development of new protocols and strategies which address and mitigate WPV. It also ensures the well-being of nurses working in hospital wards, enhances workplace performance and improves quality of care (Kitaneh & Hamdan, 2012). Lowering the incidence of WPV may lead to more work satisfaction and less attrition rates from wards where nurses are acutely needed.

Jakobsson et al. (2020) argued that although there is a high incidence of WPV within hospital wards, various researchers prefer to focus on WPV occurring in more acute settings, and therefore there is less literature addressing ward-based WPV. This study focuses on addressing WPV in adult local hospital wards. It will specifically investigate external WPV, based on the findings by Hahn et al. (2008), who identified patients and/or relatives as being the main perpetrators of WPV.

This investigation intends to highlight the prevalence of adult ward-based WPV in the local hospital and its reported effect(s) on nurses. Since this subject has not been addressed by local researchers, conducting this study gives the present author an opportunity to address this gap in local literature.

1.5 Research Questions, Aims and Objectives

The following research questions were developed for this study:

1. What is the prevalence of WPV from patients and/or their relatives encountered by nurses in adult local hospital wards?
2. Which factors are considered by local hospital ward nurses as increasing the risk of WPV?
3. How do ward nurses respond when encountering WPV?
4. How do nurses in local hospital wards describe the impact of WPV on their well-being?
5. Which strategies are perceived to mitigate WPV in adult local hospital wards?

This study aims to investigate the prevalence of WPV in local hospital wards, and how nurses working in the local hospital adult wards respond to WPV from patients and/or relatives, along with nurses' reported well-being.

To achieve this aim, the following objectives were set out:

1. Investigate the reported prevalence of WPV in local hospital adult wards.
2. Identify the risk factors (related to victim, perpetrator and environmental/situational) which increase WPV in local hospital adult wards;
3. Identify local nurses' awareness of the existence of incident forms which can be utilised to report WPV in the local hospital;
4. Describe nurses' responses and reporting behaviours when exposed to WPV from patients and/ or their relatives;
5. Investigate the impact of WPV on nurses' well-being in terms of personal and psychological well-being, familial and societal relationships, and feelings towards the workplace;
6. Investigate perceptions of mitigation strategies directed towards lessening WPV.

Since this study is a first of its kind in Malta, it aims at gathering knowledge about nurses' views which could be generalised to the local population of nurses working in adult wards. Therefore, a quantitative and descriptive research approach was used for this study. An established tool developed by Kumari et al. (2021) (discussed in Chapter 3) was utilised to address the aim of this study.

1.6 Overview of the study

The next chapter includes a literature review addressing the different domains of WPV. This is followed by Chapter 3 which illustrates the methodology utilised for this study. Subsequently, Chapter 4 presents the findings of the study which are discussed in Chapter 5. Chapter 6 summarises the study findings and provides recommendations for further research.

Chapter 2

Literature Review

2.0 Introduction

A literature review enables a researcher to gain insight of existing knowledge about a particular topic (Polit & Beck, 2010). Literature is selected after a thorough search to identify the most reliable and relevant literature regarding the topic of interest. This chapter will provide the reader with a description of the search strategy, along with a critical evaluation of the available literature which addresses the aim of this study. The findings shall then be discussed and existent theoretical frameworks pertaining to WPV will be explored. Gaps in knowledge will be presented.

2.1 The search strategy

This section describes the thorough search through the literature which was carried out between September and November, 2022. Electronic bases were used together with reference lists of articles of interest for retrieval of literature relevant to the research questions.

2.1.1 Keywords, synonyms and search tools

According to De Brun (2013), using keywords ensures an effective search, yielding results based on the research question(s). The use of synonyms and alternative phrases along with the keywords as search terms enables the researcher to broaden the search, leading to maximal retrieval of relevant literature (DeBrun, 2013). For the following search strategy, the Population, Exposure and Outcome (PEO) framework was utilised to identify and generate keywords (Table 2.1). According to Munn et al., (2018), the PEO framework is designed to determine the nature of a relationship between exposure(s) and outcome(s) on a determined population. Synonyms and alternative phrases for keywords were generated through

the Medical Subject Heading (MeSH) browser, the English thesaurus, and brainstorming (Table 2.1).

For search terms having various spellings and/or endings, the wildcard symbol '?' and the truncation symbol '*' were used, respectively (Table 2.1). The use of these symbols ensured that literature retrieved incorporated variations of the search terms afore mentioned, generating more results (Elton Bryson Stephens Company (EBSCO), 2021).

The Boolean operators 'AND' and 'OR' were used to generate a search syntax for the literature search strategy (Table 2.1). The term 'AND' combined search terms which were to be retrieved in the final results, ensuring specificity. The term 'OR' was utilised between search terms for the retrieval of literature containing either one of the terms being searched, broadening the results and ensuring sensitivity (DeBrun, 2013). Ensuring sensitivity and specificity through the search process prevents the retrieval of unnecessary and irrelevant studies.

Table 2.2 outlines the search syntax utilised for this searching process. The formulation of the search syntax was based on guidelines issued by Bettany-Salitkov (2010), providing a clear framework of how search terms were combined throughout the research process.

Table 2.1

Keywords, synonyms/ alternative phrases and search terms utilised for the search process

PEO element	Keyword	Synonyms/ alternative phrases	Search terms
Population (P)	Nurses	Nurse, nursing staff	Nurse*, nursing staff
	Hospital wards	Ward(s), hospital(s), healthcare	Hospital ward*, ward*, hospital*, healthcare
Exposure (E)	Workplace violence	WPV, workplace aggression, aggression, aggressive, violent, violence, threat(s), threatening, abuse(d), abusive, injury, injuries, injured	Workplace violence, WPV, workplace aggression, aggressi*, violen*, threat*, abus*, injur*
	Patients	Patient, inpatient(s)	Patient*, inpatient*
	Relatives	Relative, family member(s), family, visitor(s)	Relative*, family member*, family, visitor*
Outcome (O)	Respond	Response(s), react, reaction(s)	Respon*, react*
	Well-being	Wellbeing, well being, impact(s), effect(s), health, welfare, wellness, health	Well?being, impact*, effect*, wel*, health
	Prevalence	Prevalent, incidence(s), risk(s), frequent, frequency, frequencies, occur(s), occurrence(s), instance(s)	Prevalen*, incidence*, risk*, frequen*, occur*, instance*

Table 2.2

The search syntax used based on Bettany-Saltikov's (2010) guidelines

Population	**Exposure**	**Outcome**
1. "Nurse*	7. "Workplace violence"	21. "Well?being"
2. "Nursing staff"	8. "WPV"	22. "Impact*"
3. "Hospital ward*"	9. "Workplace aggression"	23. "effect*"
4. "Ward*"	10. "Aggressi*"	24. "Wel*"
5. "Hospital*"	11. "Violen*"	25. "Health"
6. "Healthcare"	12. "Threat*"	26. "Respon"
	13. "Abus*"	27. "React*
	14. "Injur*"	28. "Prevalen*"
	15. "Patient*"	29. "Risk*"
	16. "Inpatient*"	30. "Frequen*"
	17. "Relative*"	31. "Occur*"
	18. "Family member*"	32. "Instance*"
	19. "Family"	
	20. "Visitor*"	
Combination A: search terms 1-2 were combined using "OR"	**Combination C:** search terms 7-14 were combined using "OR"	**Combination E**: search terms 21-25 were combined with "OR"
Combination B: search terms 3-6 were combined using "OR"	**Combination D:** search terms 15-20 were combined using "OR"	**Combination F**: search terms 26-27 were combined with "OR"
		Combination G: search terms 28-32 were combined with "OR"

2.1.2 Information sources

Databases are essential to the research process as they provide the researcher with tools to refine research and access to credible, peer-reviewed literature published by experts in the topic of interest (EBSCO, 2015). The University of Malta (UoM) online library was utilised to access databases from the Hybrid Discovery (HyDi) platform. Databases categorised under 'Health Sciences' were used for this search process. These included Academic Search Ultimate, AgeLine, Cochrane databases, MEDLINE complete and APA PsychInfo (all of which were incorporated within EBSCO host), MEDLINE, PubMed, PubMed Central (PMC), and Scopus. Furthermore, references from relevant literature were scrutinised to identify any secondary sources, which were then accessed through Google Scholar and the HyDi platform.

2.1.3 Eligibility criteria and limiters applied

Garg (2016) stated that eligibility (inclusion/exclusion) criteria need to be applied in research to prevent the retrieval of irrelevant studies. Table 2.3 shows the eligibility criteria applied in this study, supported by rationale. Searches through large databases need to be limited to ensure that specific search results are obtained (DeBrun, 2013). Table 2.4 shows the limiters which were applied within the databases in this study as well as the rationale for applying each limiter.

Table 2.3

Inclusion and Exclusion Criteria of the search process with rationale

Characteristics	Inclusion Criteria	Exclusion Criteria	Rationale
Age	Studies with patients and/or relatives aged 18 and over.	Studies with patients and/or relatives aged under 18 years.	Focus of study addressed WPV occurring in adult ward settings.
Population	Studies addressing opinions/perceptions of nurses.	Studies addressing opinions/perceptions of healthcare workers (not including nurses), patients and/or relatives.	Focus of study addressed WPV occurring towards nurses.
Workplace setting	Studies including WPV occurring in hospital wards.	Studies based in the emergency department, intensive care units, outpatients, clinics, health centres and in psychiatric settings.	Wards were the setting of interest for this study. Any other settings were excluded to ensure homogeneity in exposure to WPV.
Types of WPV	Studies addressing physical and verbal WPV towards nurses, with patients and/or relatives being perpetrators of WPV.	Studies not addressing physical and verbal WPV. Studies which did not include patients and/or relatives as perpetrators of WPV, and where the victims of WPV were not nurses.	This study focused on physical and verbal WPV, with patients and/or relative being the main perpetrators.
Outcomes	Outcomes of eligible studies addressing the prevalence of WPV (including its causing and mitigating factors), nurses' responses/reactions and/or reported well-being when faced with WPV.	Studies determining outcomes which did not include prevalence of WPV, responses/reactions and well-being to WPV from nurses.	Outcomes of interest for this study included prevalence of WPV (including causing and mitigating factors), nurses' responses/reactions and/or well-being when faced with WPV.
Studies	Systematic reviews and meta-analysis, randomised controlled studies, cohort studies, case-controlled studies and cross-sectional studies as these possess the highest quality of evidence with the lowest probability for bias (Burns et al., 2011).	Case reports, background information, editorials, case-series studies, expert opinions and protocols as these possess poor quality of evidence along with potentially biased outcomes (Burns et al., 2011).	Designs characterised with high quality of evidence and low probability of bias produce results which are at less risks of systemic errors (Burns et al., 2011)

Table 2.4

Limiters for the research process and rationale for choice

Limiters	Rationale
Language (English)	English is the only language understood by the author. Additionally, as English is the international language, major studies which were initially reported in another language were often translated into English.
Year of eligible studies (2012-2022)	This ensured that retrieved studies were the most recent.
Human	For the purpose of this study, humans were the species of interest.
Peer-reviewed	This ensured that prior to publication, the retrieved studies were reviewed by experts, hence enhancing the study's level of quality.

2.1.4 The search strategy plan

A search strategy is necessary since it enables the researcher to combine various key concepts pertaining to the topic of interest in order to acquire relevant and accurate results (Creswell & Creswell, 2018). Table 2.5 outlines the search strategy plan for this literature review. Combinations used for this search refer to those illustrated in Table 2.2.

Table 2.5

The Search Strategy Plan for this literature review

Database	Keywords used with limiters and Field search (if available)	Hits	Changed implemented	Hits	Changes implemented	Hits
	Search 1		**Search 2**			
EBSCO host	"Combination A" AND "Combination B" AND "Combination C" AND "Combination D" AND "Combination E" AND "Combination F" AND "Combination G" "English", "peer-reviewed", and year range "2012-2022" used as limiters ("Humans" not available) "All Text" Field selected	**24,459**	"Combination A" AND "Combination B" AND "Combination C" AND "Combination D" AND "Combination E" AND "Combination F" AND "Combination G" "English", "peer-reviewed", and year range "2012-2022" used as limiters ("Humans" not available) Field changed to "Abstract" to narrow results	**310**		

Table 2.5 (*continued*)

The Search Strategy Plan for this literature review

	Search 1	**Hits**
MEDLINE	"Combination A" AND "Combination B" AND "Combination C" AND "Combination D" AND "Combination E" AND "Combination F" AND "Combination G" "English", "peer-reviewed", "Humans" and year range "2012-2022" used as limiters "Anywhere" Field selected	**131**

Table 2.5 (*continued*)

The Search Strategy Plan for this literature review

	Search 1	**Hits**	**Search 2**	**Hits**
Scopus	"Combination A" AND "Combination B" AND "Combination C" AND "Combination D" AND "Combination E" AND "Combination F" AND "Combination G" "English", "Humans" and year range "2012-2022" used as limiters (No option for "peer-reviewed") "Article title, abstract and keywords" Field selected	**0**	"Combination A" AND "Combination B" AND "Combination C" AND "Combination D" "Combination E", "Combination F", and "Combination G" removed to broaden search results "English", "Humans" and year range "2012-2022" used as limiters (No option for "peer-reviewed") "Article title, abstract and keywords" Field selected	**48**

Table 2.5 (*continued*)

The Search Strategy Plan for this literature review

	Search 1	Hits	Search 2	Hits	Search 3	Hits
PubMed	"Combination A" AND "Combination B" AND "Combination C" AND "Combination D" AND "Combination E" AND "Combination F" AND "Combination G" "English", "Humans", year range "2012-2022", "Meta-Analysis", "Randomized Controlled Trial", and "Systematic Review" used as limiters (No option for "peer-reviewed") "Full Text" Field selected	**0**	"Combination A" AND "Combination B" AND "Combination C" AND "Combination D" "Combination E", "Combination F", and "Combination G" removed to broaden search results "English", "Humans", year range "2012-2022", "Meta-Analysis", "Randomized Controlled Trial", and "Systematic Review" used as limiters (No option for "peer-reviewed") "Full Text" Field selected	**844**	"Combination A" AND "Combination B" AND "Combination C" AND "Combination D" "English", "Humans", year range "2012-2022", "Meta-Analysis", "Randomized Controlled Trial", and "Systematic Review" used as limiters (No option for "peer-reviewed") Field changed to "Abstract" to narrow down search results	**844**

Table 2.5 (*continued*)

The Search Strategy Plan for this literature review

	Search 1	Hits	Search 2	Hits
PubMed using MeSH terms	(“nurse”[MeSH Terms]) AND (“hospital wards”[MeSH Terms]) AND (“workplace violence”[MeSH Terms]) AND (“patients”[MeSH Terms]) AND (“relatives”[MeSH Terms]) AND (“respond”[MeSH Terms]) AND (“well-being[MeSH Terms])) AND (prevalence[MeSH Terms]) “English”, “Humans”, year range “2012-2022”, “Meta-Analysis”, “Randomized Controlled Trial”, and “Systematic Review” used as limiters (No option for “peer-reviewed”) “Full Text” Field selected	**0**	(“nurse”[MeSH Terms]) AND (“hospital wards”[MeSH Terms]) AND (“workplace violence”[MeSH Terms]) AND (“patients”[MeSH Terms]) AND (“relatives”[MeSH Terms]) MeSH terms related to outcomes removed to broaden search results “English”, “Humans”, year range “2012-2022”, “Meta-Analysis”, “Randomized Controlled Trial”, and “Systematic Review” used as limiters (No option for “peer-reviewed”) “Full Text” Field selected	**0**

Table 2.5 (*continued*)

The Search Strategy Plan for this literature review

	Search 1	Hits	Search 2	Hits	Search 3	Hits
PMC	"Combination A" AND "Combination B" AND "Combination C" AND "Combination D" AND "Combination E" AND "Combination F" AND "Combination G" Year range "2012-2022" used as a limiter. (No options for "English" or "Human". Studies already peer-reviewed "All Text" Field Selected	**0**	"Combination A" AND "Combination B" AND "Combination C" AND "Combination D" "Combination E", "Combination F", and "Combination G" removed to broaden search results Year range "2012-2022" used as a limiter. (No options for "English" or "Human". Studies already peer-reviewed "All Text" Field Selected	**1001**	Combination A" AND "Combination B" AND "Combination C" AND "Combination D" Year range "2012-2022" used as a limiter (No options for "English" or "Human". Studies already peer-reviewed Field changed to "Abstract" to narrow down search results	**0**

Table 2.5 (*continued*)

The Search Strategy Plan for this literature review

	Search 1	Hits	Search 2	Hits
PMC using MeSH terms	(“nurse”[MeSH Terms]) AND (“hospital wards”[MeSH Terms]) AND (“workplace violence”[MeSH Terms]) AND (“patients”[MeSH Terms]) AND (“relatives”[MeSH Terms]) AND (“respond”[MeSH Terms]) AND (“well-being[MeSH Terms])) AND (prevalence[MeSH Terms]) Year range “2012-2022” used as a limiter. (No options for “English” or “Human”. Studies already peer-reviewed “All Text” Field Selected	**0**	(“nurse”[MeSH Terms]) AND (“hospital wards”[MeSH Terms]) AND (“workplace violence”[MeSH Terms]) AND (“patients”[MeSH Terms]) AND (“relatives”[MeSH Terms]) MeSH terms related to outcomes removed to broaden search results Year range “2012-2022” used as a limiter. (No options for “English” or “Human”. Studies already peer-reviewed “All Text” Field Selected	**0**

2.1.5 Identification and selection of studies

The search yielded a total of 2,334 studies. A further six studies were retrieved from references of relevant literature. A total of 863 duplicates were eliminated, leaving 1477 articles, the titles and aims of which were scrutinised. Abstracts of relevant titles were examined to determine eligibility for this literature review. In instances where the titles, aims, and abstracts of retrieved studies were not explicit in determining their applicability to this review, the author read through the article to determine its relevance. This resulted in 56 studies, which were examined to determine their eligibility through the application of inclusion and exclusion criteria.

The 56 studies focused on WPV occurring in an in-hospital setting, addressing ward-based WPV along with other settings, including psychiatric, emergency departments and intensive therapy units. A further 50 full-text articles were eliminated. Reasons for this are shown in Figure 2.1 as a Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA)-2020 flowchart. This is a standard tool which offers guidance for identifying, screening and selecting eligible studies (Page et al., 2021).

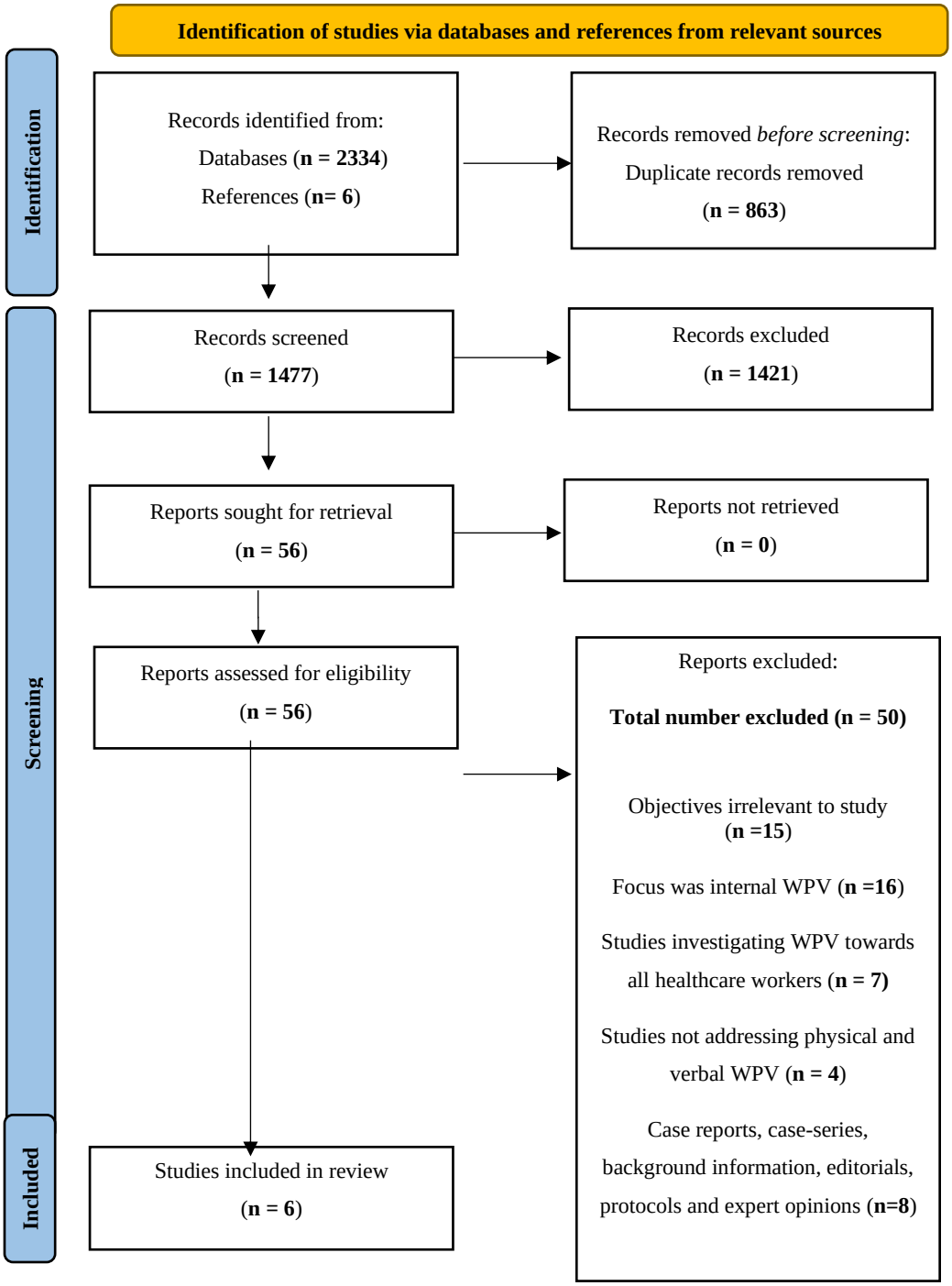
A total of six quantitative studies were ultimately selected for this literature review (Table 2.6). None of the studies focused solely on ward-based WPV which is the subject of this study. Despite this limitation, four of the final six key studies selected indicated the sample size of nurse participants working in wards. In the studies conducted by Gunaydin and Kutlu (2012), Sato et al. (2013) and Jiao et al. (2015), more than half of the participants within each study worked in clinical wards. This might indicate that ward nurses contributed to a greater extent than nurses in other settings, hence, some of these findings may apply to ward nurses. Although

Kim et al. (2020) indicated the sample size of participant ward nurses, less than half of the total study population worked in wards, hence their contribution towards the outcomes were not as promising as in the three studies mentioned previously. Pérez-Fuentes et al. (2020) and Dehghan-Chaloshtari et al. (2020) did not address sample size of participants working in different fields within their studies. As the latter three studies addressed nurse-patient and nurse-relative scenarios, their outcomes may still apply to this research project and were therefore included for appraisal.

To keep in line with the study's chosen focus, the following were excluded from this literature review: internal WPV, external WPV in out-of-hospital settings (such as in clinics), and WPV towards other healthcare professionals.

Figure 2.1

The process of study selection illustrated as a PRISMA-2020 flow diagram (Adapted from Page et al., 2021)



2.1.6 Overview of studies included for review

The final six articles selected (Table 2.6) identified WPV towards nurses in an in-hospital setting. The ages of participants ranged between 18 and 62 years, with the majority being in their thirties. Most of the nurses across the studies were female. Kim et al. (2020) failed to illustrate data with regards to age and gender of participants. There was no major distinction in years of experience of respondents across the retrieved studies. Jiao et al. (2015) reported that the majority of respondents worked rotating shifts, whilst Dehghan-Chaloshtari and Ghodousi (2020) reported that a large percentage of nurses worked night shifts. Kim et al. (2020) outlined that the majority of respondents worked 20-to 39-hour shifts per week. The remaining studies did not report data regarding employment or shift type. Furthermore, none of the studies specified the position held by respondent nurses. Countries of origin of these studies included Turkey (Gunaydin, & Kutlu, 2012), Japan (Sato et al., 2013), China (Jiao et al., 2015), Spain (Pérez-Fuentes et al., 2020), Iran (Dehghan-Chaloshtari & Ghodousi, 2020) and the USA (Kim et al., 2020).

Table 2.6

Summary of the retrieved studies according to chronological year of publication

Authors, Year, Country and Title	Aim	Methodology	Population	Main Findings
Gunaydin, N. & Kutlu, Y. (2012) Istanbul, Turkey Experience of Workplace Violence Among Nurses in Health-Care Settings	To determine the type, extent and effects of WPV in various health-care settings.	Questionnaire-based, cross-sectional, descriptive design.	1300 questionnaires were distributed. 868 (66%) of them were returned (51% from medical-surgical and oncology wards).	Prevalence: 64.1% reported experiencing WPV (94.2% verbal and 39.9% physical). Level of education and overcrowding were risk factors for WPV. Implementation of protocols, procedure and educational programmes were perceived as useful mitigation strategies. Well-being: Nurses reported anger; did not consider taking leave of absence and did not consider resignation. Responses: 96.6% did not report the event and 53% did not seek help
Sato, K., Wakabayashi, T., Kiyoshi-Teo, H., & Fukahori, H. (2013) Tokyo, Japan Factors associated with nurses' reporting of patients' aggressive behavior: A cross-sectional survey	To explore frequency of nurses reporting WPV to their managers, examine association between reporting and demographic factors, and determine reasons for underreporting	Questionnaire-based, cross-sectional design.	1953 questionnaires were distributed, 1498 (76.7%) were returned (52% from medical-surgical wards), and 113 were excluded	Prevalence and well-being: 46.1% respondents experienced physiological impacts secondary to physical WPV whilst 88.3% experienced mental impacts secondary to verbal WPV. Managerial support was perceived as a useful mitigation strategy. Responses: 70% of those experiencing mildest assessed impacts of WPV hardly reported any incidents. Well-being: 33% reported no injuries/ functional disorder in response to physical WPV, whilst 1.4% reported injuries and functional disorders. In response to verbal WPV, 49% reported experiencing temporary stress and 5% reported experiencing continuous stress which made them unable to care for patients and carry out daily activities.

Table 2.6 *(continued)*

Summary of the retrieved studies according to chronological year of publication

Authors, Year, Country and Title	Aim of the Study	Methodology	Population	Main Findings
Jiao, M., Ning, N., Li, Y., Gao, L., Cui, Y., Sun, H., Kang, Z., Liang, L., Wu, Q., & Hao, Y. (2015). Heilongjiang, China Workplace violence against nurses in Chinese hospitals: a cross-sectional survey	To determine the prevalence of WPV encountered by Chinese nurses, identify any risk factors and provide basis for future interventions	Retrospective cross-sectional survey design and interviews.	588 nurses working in hospital areas (83% worked medical and surgical wards) were selected to fill out a questionnaire. 12 nurses were selected (based on their roles and experience with WPV) for in-depth interviews.	Prevalence: Verbal WPV occurred more frequently (68.8%) than physical WPV (7.8%). Years of experience, age, shift type, miscommunication and unsatisfactory treatment outcomes were reported as risk factors for WPV. Unbiased media reporting and managerial support were reported as useful mitigation strategies. Well-being: WPV was associated with PTSD and high anxiety levels
Pérez-Fuentes, M., Molero Jurado, M., Martos Martínez, Á., Simón Márquez, M., Oropesa Ruiz, N. F., & Gázquez Linares, J. J. (2020). Andalusia, Spain Cross-sectional study of aggression against Spanish nursing personnel and effects on somatisation of physical symptoms	To analyse effects of WPV on nurses as well as the role anxiety has in somaticising physical symptoms.	Quantitative, observational, cross-sectional survey design.	1377 questionnaires were distributed and 1357 (99%) were returned for analysis.	Prevalence: 11.8% reported experiencing WPV. Triggers for WPV included delayed attention and lack of resources. The presence of security was useful in mitigating WPV. Wellbeing: The occurrence of WPV resulted in the appearance of somatic symptoms. Responses: Nurses responded by attempting to control the situation through dialogue and seeking help from security/colleagues.

Table 2.6 *(continued)*

Summary of the retrieved studies according to chronological year of publication

Authors, Year, Country and Title	Aim of Study	Methodology	Population	Main Findings
Dehghan-Chaloshtari, A., & Ghodousi, A. (2020). Isfahan, Iran Factors and Characteristics of Workplace Violence Against Nurses: A Study in Iran	To investigate all forms of WPV against nurses occurring in Shahrekord hospitals.	Analytical and descriptive, cross-sectional survey design	100 questionnaires were distributed and returned for analysis.	Prevalence: The prevalence of verbal WPV was higher than that of physical (84% and 57% respectively). Nurses' gender, age, work experience and shift type contributed to incidence of WPV. Responses: Nurses did not ask for help in response to physical WPV, and showed no reaction for verbal WPV.
Kim, S., Mayer, C., & Jones, C.B. (2020). South-eastern, USA. Relationships between nurses' experiences of workplace violence, emotional exhaustion and patient safety	To understand the status of WPV in hospitals, and identify the relationships between WPV and nurses' experiences, emotional exhaustion and perceptions of patient safety	Cross-sectional analysis, survey design	3601 questionnaires were distributed and 1781 were returned for analysis (19.2% and 12.6% worked in medical and surgical wards, respectively).	Prevalence: Incidence of verbal WPV (from relatives) was higher than physical WPV (from patients), but less than verbal WPV (from patients). Well-being: WPV increased nurses' emotional exhaustion, ultimately lower perceptions of patient safety. Responses: underreporting of WPV was shown, with verbal WPV being less reported than physical WPV.

All the key studies utilised a quantitative, cross-sectional survey design for data collection. A quantitative approach enabled the participation of a large population. As discussed by Polit and Beck (2010), this approach provides a great statistical power, yielding findings which can be generalised to the population of interest. Jiao et al. (2015) conducted in-depth interviews for the study, along with survey distribution. This strategy allows researchers to explore participants' views along with the meaning that these participants give to the experience (Polit & Beck, 2010).

Cross-sectional studies are described as observational study designs which enable the researcher to collect data from a particular population at a single point in time (Wang & Cheng, 2020). This design comes with both strengths and limitations, which shall be discussed further in the following chapter. Yet, one of the main weaknesses of this design is that it is susceptible to bias, such as recall and non-response (Wang & Cheng, 2020). Cross-sectional studies are ranked fifth in the Hierarchy of Evidence (Figure 2.2). This hierarchy classifies study designs according to the level of evidence and probability of bias they present (Burns et al., 2011). Although cross-sectional designs do not offer the highest evidence-based outcomes, Burns et al. (2011) illustrated that such studies should not be dismissed as unreliable, but rather interpreted cautiously in light of possible bias they might generate. The following sections shall highlight types of bias the researcher encountered in the retrieved studies, along with methods adopted by the authors to reduce its occurrence.

Figure 2.2

The Hierarchy of Evidence (Yetley et al., 2016)

2.2 Critique of retrieved key studies

This section presents the critical appraisal of the six chosen cross-sectional studies through applying the Appraisal tool for Cross-Sectional Studies (AXIS) (Downes et al., 2016). This AXIS tool is applied to appraise observational, cross-sectional studies for methodological bias, ensuring relevance of literature (Katrak et al., 2004). This tool is composed of a series of questions, each answered in a 'yes', 'no' or 'don't know' manner, designed to guide the researcher's evaluation of a study. Table 2.7, which was formulated based on the questions incorporated in the AXIS tool (Kulik et al., 2022), summarises this section.

2.2.1 Clarity and specificity of study focus

All six retrieved studies introduced the study with structured abstracts which clearly stated the aims/objectives of the study, including the terms 'nurse' or 'nursing' and 'violence' or 'aggression'. This was followed by an introduction to the study, which included rationale and the importance of the respective research, and

ultimately concluded with aims/objectives. As outlined by Masic (2011), these qualities indicate a well-designed cross-sectional study.

2.2.2 Study design

Using an appropriate study design reduces the chance of flawed outcomes and pre-trial bias (Pannucci & Wilkins, 2010). Cross-sectional design is suitable to identify the prevalence of a phenomenon at a given time as well as relationships between exposure to a phenomenon and outcomes (Wang & Cheng, 2020). Since the retrieved studies aimed to identify these factors in their studies, a cross-sectional approach was deemed appropriate to collect data for the six studies.

2.2.3 Target populations and establishing sampling frames

Groves et al. (2004) emphasised the importance of clearly defining and establishing a target population upon which a study's inferences will be made. The authors asserted the need to acquire a sample frame which is representative of the target population to ensure that findings can be attributed to the actual population. The sample frame consists of members who have a chance in being selected into the final survey sample (Grooves et al., 2004). Gunaydin and Kutlu (2012) and Sato et al. (2013) considered nurses working in hospitals of the country within which the study was conducted as the target population. The former reported that the sample frame selected comprised nurses working at nine hospitals in Istanbul. Istanbul receives the highest influx of emigrant nurses from different Turkish countries; therefore, representativeness of the sample frame was ensured (Gunaydin & Kutlu, 2012). Sato et al. (2013) acquired their sample frame by contacting hospital administrations who were interested in supporting their research. The authors argued that although this might limit generalisability of results, their study was conducted in multiple facilities, *potentially* enhancing representativeness. The remaining four

studies selected nurses working at hospitals in provinces or cities as their target population. In the studies conducted by Pérez-Fuentes et al. (2020) in Andalusia, and Dehghan-Chaloshtari and Ghodousi (2020) in Shahrekord, the whole target population itself; that is, all the nurses working in hospitals of their respective cities, was included for the final survey sample. Jiao et al. (2015) selected seven hospitals, representing different areas of the province of Heilongjiang. Kim et al. (2020) reported that the sample frame of nurses was acquired from a large medical centre in South-Eastern USA. However, no information was given whether this frame was representative of the target population.

2.2.4 Participant sample selection

Sample size and selection are crucial factors which need to be considered for a cross-sectional survey (Grooves et al., 2004). Whilst an appropriate sample size ensures accuracy of findings, suitable sample selection methods ensure outcome generalisability to the target population and prevents sample selection bias. This bias occurs when members within a sample frame do not have equal chances of inclusion in the final sample. Hence, a representative sample is ensured by randomisation of participants (Grooves et al., 2004). Gunaydin and Kutlu (2012) ensured randomisation through probability sampling and reported the use of a sample size formulation to determine the minimum sample size required for significant outcomes. Conversely, Sato et al. (2013) reported the use of convenience sampling for recruitment, subjecting the study to a high risk of selection bias. No details with regards to sample size calculation were outlined, hence challenging accuracy and power of outcomes. Similarly, Jiao et al. (2015) reported random selection of participants, yet failed to discuss sample size justification. As previously mentioned, the studies conducted by Pérez-Fuentes et al. (2020), and Dehghan-Chaloshtari and

Ghodousi (2020) recruited the whole target population for their respective studies, yet only the latter reported the use of Cochran's sample size formula to determine the minimum sample size required. Kim et al. (2020) included all nurses working in the chosen medical centre, however, they failed to report the minimum sample size required to ensure power and accuracy in the final outcomes.

2.2.5 Validity and reliability of tools

All six key studies ensured tool validity and reliability as pilot testing and expert opinion (for content validity) were reported. Validity ensures the appropriateness of the tool being used, whereas reliability refers to the degree to which a tool produces consistent results if attributes are repeatedly measured (Downes et al., 2016). Cronbach's alpha is a measurement of the internal consistency within a set of survey items; the higher its value, the higher is the reliability of the respective questionnaire (Polit & Beck, 2010). Pérez-Fuentes et al. (2020), Sato et al. (2013), Dehghan-Chaloshtari and Ghodousi (2020), and Kim et al. (2020) reported high internal consistencies in the respective instruments with the latter three studies reporting a Cronbach's alpha of higher than 0.80, confirming tool reliability. Jiao et al. (2015) reported tool stability through a test-retest value of 0.87, another indicator of good instrument reliability (Polit & Beck, 2010).

None of the studies utilised the same tool. However, all tools utilised across studies addressed nurses' demographic characteristics and prevalence of WPV. Additionally, tools used in the studies conducted by Gunaydin and Kutlu (2012), Perez-Fuentes et al. (2020) and Kim et al. (2020) addressed both nurses' well-being and responses to WPV. The tool used in the study conducted by Dehghan-Chaloshtari and Ghodousi (2020) addressed responses to WPV, whilst that of Sato et al. (2013) and Jiao et al. (2015) addressed nurses' well-being.

2.2.6 Statistical analysis

Downes et al. (2016) described the importance of a clear presentation and description of methodologies utilised within a cross-sectional study, along with statistical methods and software packages used, and statistical significance or probability values (*p*-value). A value larger than the statistical value set by the researchers indicates a greater possibility of a type 1 error, that is, the inappropriate rejection of the null hypothesis (Downes et al., 2016). The six retrieved studies gave a detailed account, in text form, of the statistical methodologies utilised in the 'method' section of the studies, each naming the specific statistical tests used to analyse data collected. This ensures that the same methods can be repeated adequately by other researchers, establishing reliability. All of the studies except that by Gunaydin and Kutlu (2012) divulged the name of the software package used. All the retrieved studies set the *p*-value at 0.05, that is, values higher than 0.05 indicated no statistical difference in the respective results.

2.2.7 Participant response

Participant response rates were reported in all six studies. Percentage of nurses' response rates ranged from 60% to 100% across the studies, with Dehghan-Chaloshtari and Ghodousi (2020) reporting full response (100%), all indicating adequate response rates. None of the studies reported the use of reminders and/or compensation to participants to enhance response rates.

None of the retrieved studies addressed methodologies to deal with non-respondents, nor published any results or data which addressed this category, hence subjecting the studies to increased risk of non-response bias. As argued by Downes et al. (2016), non-response bias occurs when responses from respondents vary

significantly from data which could have been provided from non-respondents, consequently shifting representativeness away from respondents.

2.2.8 Presentation and discussion of findings

All the retrieved studies presented results in both text and table form. Most studies included percentages and *p*-values to report results. No reporting bias was noted within the studies. This was ensured and confirmed through examining whether all the analyses described in the methodologies of the studies were presented in the 'results' section. A detailed rapport of these study's findings shall be discussed in Section 2.3.

Another crucial aspect of a cross-sectional study as described by Downes et al. (2016) is the discussion of the key findings reported in the 'results' section, whilst ensuring that no data is overlooked as insignificant, especially if it pertains to the aim of the study. Researchers also need to understand and discuss any limitations which might have been encountered, to determine their influence on outcomes and conclusions.

The six studies discussed findings thoroughly in light of previous literature which addressed similar topics. Authors discussed findings which were both statistically and non-statistically significant, ensuring that no outcomes were overlooked. Limitations were recognised and discussed in all studies except for that by Dehghan-Chaloshtari and Ghodousi (2020). As mentioned earlier in this chapter, the population of female participants was higher across the studies than male participants. This is especially seen in the study by Gunaydin and Kutlu (2012), where all participants were female. Although the study reports this occurrence, it is unclear whether this poses a limitation in the representativeness of the target

population. This is because the authors discussed the nursing profession in Turkey as being mostly practiced by women. Conversely, Pérez-Fuentes et al. (2020) recognised the female dominance in their study as a limitation. However, such a consideration may be debatable since the World Health Organisation (WHO) (2023) indicated that the majority of nursing personnel in Spain in 2016 were female (83.6%). This suggests that gender distribution of respondents for the study of Pérez-Fuentes et al. (2020) may have been representative of the target population. This study also reported the low mean age of participants as a limitation to the study's ability to analyse associations of occurrence of WPV with age and years of experience. Jiao et al. (2015) recognised that the small sample size of respondents (*n*=588) might have limited the study's power. The authors also acknowledged the risk of recall bias, as data collection was dependent on the ability of participants to recall experiences of the previous 12 months. Sato et al. (2013) and Kim et al. (2020) overcame this risk by requesting participants to recall experiences of WPV occurring in the previous one month and three months respectively. Although the remaining three studies were at increased risk of recall bias, as their method required participants to recall experiences in the previous year, none of the studies acknowledged this factor as a limitation.

2.2.9 Conflict of interest and ethical considerations

Conflict of interest through funding needs to be identified as this might result in publication bias and inaccurate results (Downes et al., 2016). Sato et al. (2013), Dehghan-Chalosthari and Ghodousi (2020) and Kim et al. (2020) declared no conflict of interest or funding for their study. Jiao et al. (2015) and Pérez-Fuentes et al. (2020) declared funding from university research foundations, whilst Gunaydin and Kutlu (2012) did not specify anything regarding funding or conflict of interest.

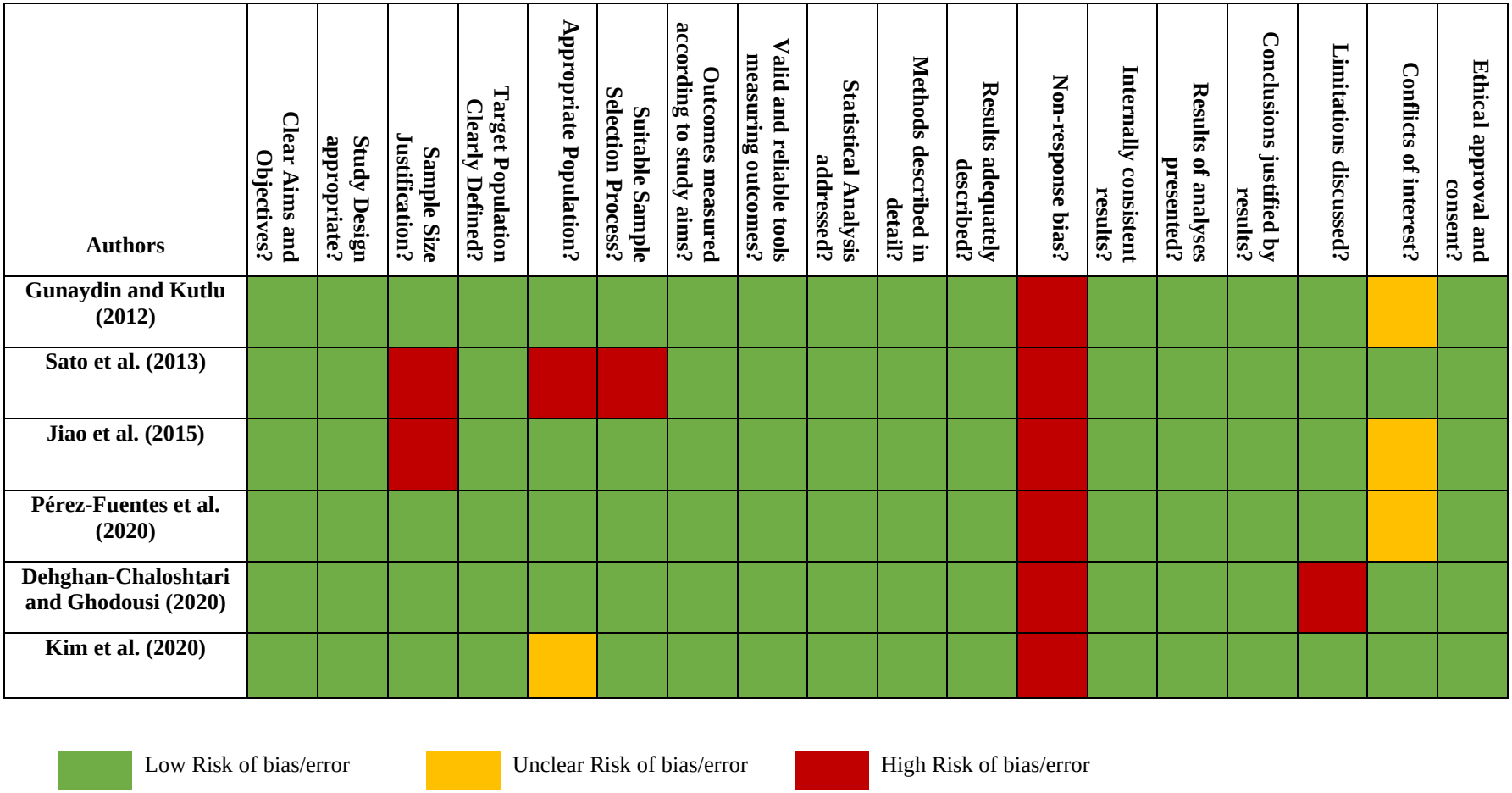
This might subject these three studies to unclear risk of publication bias, yet the former two might be at less risk than the latter, since it is unlikely that research foundations pose any conflict of interest. The six studies reported granting of ethical approval from ethical committees and declared the assurance of confidentiality and anonymity of participants.

2.2.10 Overall bias risk in all selected studies

Table 2.7 presents a summary of the relative sources of bias identified in the selected studies using the AXIS tool. It is evident that these studies had very low risks of bias, ensuring reliable findings.

Table 2.7

Summary of risk of bias/error within retrieved studies based on the AXIS tool (Adapted from Kulik et al., 2022)



2.3 Synthesis of evidence

This section shall present and discuss the outcomes retrieved from the six studies, categorising findings into themes.

2.3.1 Prevalence of WPV

Table 2.8 will consider outcomes related to prevalence and perpetrators of verbal and physical WPV. Five out of six studies presented findings as percentages, whereas Kim et al. (2020) utilised means (M) with standard deviations (SD). This difference in presentation posed limitations when comparing the overall prevalence of WPV between studies.

Table 2.8

Summary of prevalence and perpetrators of WPV

	Overall Prevalence	Prevalence of Verbal WPV	Prevalence of Physical WPV	Perpetrators
Gunaydin and Kutlu (2012)	**64.1%** (*n*=556 out of 868)	**94.2%** (*n*=524 out of 556)	**39.9%** (*n*=222 out of 556)	Main perpetrators were patients and relatives.
Sato et al. (2013)	N/S	**88.3%** (*n*=1224 out of 1385)	**46.1%** (*n*=638 out of 1385)	Perpetrators of WPV in all instances consisted of patients.
Jiao et al. (2015)	N/S	**68.8%** (*n*=405 out of 588)	**7.8%** (*n*= 46 out of 588)	Main perpetrators were patients.
Pérez-Fuentes et al. (2020)	**11.8%** (*n*=159 out of 1357)	**87.4%** (*n*= 139 out of 159) from patients **74.2%** (*n*= 118 out of 159) from relatives	**35.8%** (*n*= 57 out of 159) from patients **5.7%** (*n*= 9 out of 159) from relatives	Main perpetrators were patients and relatives.
Dehghan-Chaloshtari and Ghodousi (2020)	N/S	**84%** (*n*=84 out of 100)	**57%** (*n*=57 out of 100)	Main perpetrators identified as patients and their relatives.
Kim et al. (2020)	N/S	Main perpetrators were patients **(M= 0.88, SD= 0.90),** followed by visitors **(M= 0.52, SD= 0.70)**	Main perpetrators were patients **(M= 0.45, SD= 0.63)**	Main perpetrators were patients and relatives.

N/S: Not Specified

The overall prevalence of WPV across the majority of the studies was relatively high, with more than 60% of respondents reporting experiencing at least one form of violence (Gunaydin & Kutlu, 2012; Sato et al., 2013; Jiao et al., 2015; Dehghan-Chaloshtari & Ghodousi, 2020). Pérez-Fuentes et al. (2020) demonstrated that only 11.8% of the overall sample reported experiencing WPV. Challenges in recalling events occurring in the previous year might have contributed to the lower overall prevalence of WPV in Pérez-Fuentes et al. (2020). Further possible reasons for the discrepancy between prevalence shall be discussed further on in this chapter (Section 2.3.5). Yet, in their study, Pérez-Fuentes et al. (2020) reported how years of experience was found to positively correlate to prevalence of WPV. The authors discussed that a reason for the lower rates of WPV was due to the relatively younger ages of participants in their study. This was however not consistent with the remaining four studies, where there was a high occurrence of WPV despite overall low mean ages.

The prevalence of nurses' exposure to verbal WPV was higher than to physical WPV across the six studies. The main perpetrators of WPV were identified as patients and relatives in four out of the six studies, with the remaining two studies (Sato et al., 2020; Jiao et al., 2015) identifying patients as the main perpetrators. Gunaydin and Kutlu (2012), and Dehghan-Chaloshtari and Ghodousi (2020) argued that since the nursing profession is mostly practiced by women, patients and/or relatives are less likely to engage in physical violence and hence there is a higher probability for perpetrators to resort to verbal WPV. Since the majority of participants across the studies were female, this rationale may justify the higher prevalence of verbal WPV.

2.3.2 Determinants of WPV

Four out of six studies (Dehghan-Chaloshtari & Ghodousi, 2020; Gunaydin & Kutlu, 2012; Jiao et al., 2015; Pérez-Fuentes et al., 2020) reported factors which contributed to external WPV. The latter three studies reported nurses' perceptions of risk factors (using percentages) which contributed to WPV (Table 2.9).

Table 2.9

Nurses' perceptions of risk factors associated with occurrence of physical and verbal WPV

Risk factor	Nurses' perceptions of determinants of WPV
Overcrowding	21.2% of nurses reported that overcrowding contributed to high risks of WPV (Gunaydin & Kutlu, 2012)
Unsatisfactory treatment outcomes	66.8% of nurses reported that patients and/or relatives who were not satisfied with treatment outcomes (treatment type not specified) were more likely to resort to WPV (Jiao et al., 2015)
Miscommunication	59% of nurses reported that miscommunication between the nurse and perpetrator contributed to WPV (Jiao et al., 2015)
Delayed attention	42.1% of nurses reported that delays in attending patients and/or demands from relatives contributed to WPV (Pérez-Fuentes et al., 2020)
Lack of resources	10.1% of nurses reported that lack of resources available to resolve clinical problems contributed to WPV (Pérez-Fuentes et al., 2020)

All of the four studies mentioned afore reported demographic characteristics which were associated with increased prevalence of WPV (Table 2.10).

Table 2.10

Demographic characteristics associated with occurrence of physical and verbal WPV

Demographic characteristics	Determinants of WPV	Results Statistical significance (*p*-values)
Gender	Gender was not associated with occurrence of WPV in Jiao et al., (2015), and Pérez-Fuentes et al., (2020)	Physical WPV: **0.980**, Non-physical WPV: **0.563 (**Jiao et al., 2015) Pérez-Fuentes et al. (2020) reported no statistical significance (*p*-values not specified)
	Females were more likely to experience verbal WPV than males in Dehghan-Chaloshtari and Ghodousi (2020). No statistical significance reported for physical WPV	Physical WPV: **0.666,** Verbal WPV: **0.004** (Dehghan-Chaloshtari & Ghodousi, 2020)
Age	Age was not associated with occurrence of WPV in Gunaydin and Kutlu (2012).	Physical and verbal WPV: **>0.05** (Gunaydin & Kutlu, 2012)
	In Dehghan-Chaloshtari and Ghodousi (2020) occurrence of WPV decreased with age. In Jiao et al., (2015) age was not associated with occurrence of physical WPV, yet occurrence of non-physical WPV decreased with age.	Physical and verbal WPV **<0.05** (Dehghan-Chaloshtari & Ghodousi, 2020) Physical and verbal WPV: **<0.01** (Pérez-Fuentes et al., 2020) Physical WPV: **0.486**, Verbal WPV: **0.000** (Jiao et al., 2015)

Table 2.10 *(continued)*

Demographic characteristics associated with occurrence of physical and verbal WPV

Work experience	In Jiao et al. (2015) and Dehghan-Chaloshtari and Ghodousi (2020), inexperienced nurses (<5 years) reported higher rates of WPV than experienced nurses	Physical WPV: **0.011**, Verbal WPV: **0.000** (Jiao et al., 2015) Physical and verbal WPV: **<0.05** (Dehghan-Chaloshtari & Ghodousi, 2020)
Shift type	Work schedule was not associated with occurrence of WPV in Gunaydin and Kutlu (2012).	Physical and verbal WPV**: >0.05** (Gunaydin & Kutlu, 2012)
	In Jiao et al. (2015) and Dehghan-Chaloshtari and Ghodousi (2020), WPV occurred more frequently in nights than in day shifts.	Physical and verbal WPV: **0.000** (Jiao et al., 2015) Physical and verbal WPV: **<0.05 (**Dehghan-Chaloshtari & Ghodousi, 2020)
Level of education	In Gunaydin and Kutlu (2012), level of education increased risk of WPV.	Physical and verbal WPV: **<0.001**
	In Jiao et al., (2015) graduate nurses were more likely to experience non-physical WPV than undergraduates. Level of education was not associated with occurrence of physical WPV.	Physical WPV: **0.335**, Non-physical WPV: **0.002 (**Jiao et al., 2015)

Gender contributed to verbal WPV in Dehghan-Chaloshtari and Ghodousi (2020) where the victims of WPV were female, unlike in the studies conducted by Jiao et al. (2015) and Pérez-Fuentes et al. (2020), where gender and occurrence of WPV did not correlate. These results did not correlate with other literature (Gillespie et al., 2010), where males were more likely to experience WPV than females. These differences may be due to the greater percentage of female participants in these three studies.

Age and work experience negatively correlated with prevalence of WPV in studies conducted by Jiao et al. (2015) and Dehghan-Chaloshtari and Ghodousi (2020). In the study conducted by Gunaydin and Kutlu (2012), age did not significantly increase risk of WPV, however the authors identified a correlation between WPV and a younger age demographic. Ferns (2006) and Camerino et al. (2008), who reported negative correlations between age and occurrence of WPV in their studies, suggested that less experienced nurses might still be developing nursing competencies, hence are less likely to display professional responses when encountering workplace challenges, making them more prone to WPV.

Two out of three studies identified that WPV occurs more frequently during night shifts. Results from the studies of Jiao et al. (2015) and Dehghan-Chaloshtari and Ghodousi (2020) correlated with previous literature (McCall & Horwitz, 2004; Estryn-Behar et al., 2008; Gillespie et al., 2010). Gillespie et al. (2010) stated that during night-time, patients might more likely to be tired or confused and hence less inhibited to act violently, especially if there is lack of hospital personnel and visitors. Gunaydin and Kutlu (2012) and Jiao et al. (2015) also identified a positive correlation between level of education and occurrence of non-physical WPV. The

authors suggested that nurses with higher levels of education are often assigned tasks which require higher responsibilities, exposing them to higher risks of WPV.

Miscommunication between nurse and patient and/or relatives, delayed attention and unsatisfactory treatment outcomes were perceived as high-risk factors for WPV (Jiao et al., 2015; Pérez-Fuentes et al., 2020). Hesketh et al. (2012) argued that many cultures have high and unrealistic expectations of healthcare services. Overcrowded and understaffed hospitals often cause nurses to provide rushed and delayed care, which instigates external WPV. Lack of resources and overcrowding, especially during admissions and visiting hours, were perceived as less frequent sources of WPV (Gunaydin & Kutlu, 2012; Pérez-Fuentes et al., 2020).

2.3.3 Nurses' responses to WPV

Nurses' responses to WPV were either passive or active. Responses were mostly passive, with the majority of participants across studies (ranging from 70-92%) demonstrating underreporting of WPV (Gunaydin & Kutlu, 2012; Sato et al., 2013; Dehghan-Chaloshtari & Ghodousi, 2020; Kim et al., 2020). The last two studies illustrated that verbal WPV was less likely to be reported than physical, even though the former is more prevalent. Reasons for underreporting both types of WPV included acceptance of WPV as part of the job (Gunaydin & Kutlu, 2012; Dehghan-Chaloshtari & Ghodousi, 2020), lack of work experience, lack of managerial support, and lack of support from co-workers (Sato et al., 2013). Other passive responses included not seeking help from managers or colleagues (Gunaydin & Kutlu, 2012; Dehghan-Chaloshtari & Ghodousi, 2020) (53% and 32% respectively) and walking away (Pérez-Fuentes et al., 2020). Active responses from participants included attempting to resolve the issue through dialogue with perpetrators (49.7%) and calling security or colleagues (31.4%) (Pérez-Fuentes et al., 2020).

These findings suggest that nurses are more likely to not respond to WPV. This was demonstrated through underreporting especially among the less experienced, which in turn leads to the undermining of their prevalence. Heinrich's Law of risk management (Heinrich, 1931) emphasises the importance of identifying minor incidents. This law states that for every incident causing a major injury, there are 29 incidents causing minor injuries, and 300 incidents causing no injuries. This suggests that accidents causing no injuries need to be identified in order to prevent major injuries. Lack of support from managers and colleagues contributed greatly to this passive response. Even when attempting to respond to WPV, half of the participants opted to resolve the issue through dialogue, with only a small percentage calling security or colleagues (Pérez-Fuentes et al., 2020). These findings suggest that hospitals need to provide better managerial support and security to nursing staff. Furthermore, educational programmes targeting less experienced nurses should be developed and implemented, perhaps leading to increased awareness and appropriate reporting, eventually resulting in the development of appropriate protocols.

2.3.4 Nurses' well-being

Findings addressing nurses' well-being were reported in all the studies except by Dehghan-Chaloshtari & Ghodousi (2020). Table 2.11 presents these results as *p*-values and/or percentages (as presented in the studies).

Table 2.11

Summary of reported nurses' well-being

Author	Reported findings
Gunaydin and Kutlu (2012)	80.3% of nurses reported anger when exposed to WPV. 66% of nurses did not consider resignation, neither did they take leave of absence (91%) in response to WPV.
Sato et al. (2013)	33% reported no injuries/ functional disorder in response to physical WPV, whilst 1.4% reported injuries and functional disorders with need of medical treatment. In response to verbal WPV, 49% reported experiencing temporary stress and 5% reported experiencing continuous stress which made them unable to care for patients and carry out daily activities.
Jiao et al. (2015)	39.1% of nurses experiencing physical WPV and 13% of those experiencing non-physical WPV suffered from PTSD symptoms. Both groups reported experiencing high levels of anxiety in response to WPV. (*p*-value for physical WPV: **0.041**; non-physical WPV: **0.000**)
Pérez-Fuentes et al. (2020)	As a consequence of WPV, 10.7% reported injuries/ some type of physical or psychological consequence (not specified), whilst 89.3% reported no injuries/ any other consequence. Nurses who have experienced WPV were at higher risks of gastrointestinal problems, headaches and sleep problems (*p*-value: **<0.01** for each factor) but not for respiratory problems (*p*-value: **0.080**).
Kim et al. (2020)	Occurrence of WPV was correlated with nurses' emotional exhaustion (*p*-value: **<0.001**). The effects that WPV and nurses' emotional exhaustion has on patient safety was also assessed; nurses reporting occurrence of WPV and emotional exhaustion reported low perceptions of patient safety (*p*-value: **<0.001**).

Four out of the five studies reported psychological impacts following WPV; anger and high levels of anxiety along with post-traumatic stress disorder (PTSD) symptoms were reported in Gunaydin and Kutlu (2012) and Jiao et al. (2015) respectively. In the study by Sato et al. (2013), the majority of participants reported

experiencing temporary stress. In Pérez-Fuentes et al. (2020), only a small percentage reported psychological consequences in response to WPV. Kim et al. (2020) reported emotional exhaustion amongst nurses in response to WPV. Apart from having an adverse effect on nurses' well-being, findings illustrate how emotional exhaustion mediated by WPV could lead to declined patient safety.

Physiological impacts were reported by Sato et al. (2013) and Pérez-Fuentes et al. (2020), both of which displayed a low percentage of nurse victims who experienced direct injuries or functional disorders following WPV. However, only Pérez-Fuentes et al. (2020) demonstrated a higher prevalence of physiological symptoms amongst those exposed to WPV. The study reported correlations between exposure to WPV and risks of developing somatic disorders; headaches, gastrointestinal and/or sleeping problems. Hence, this study demonstrated a possible association between WPV and long-term physiological symptoms.

In terms of feelings developed towards workplace, the majority of nurses did not consider resignation (66%) or taking leave of absence (91%) in response to WPV (Gunaydin & Kutlu, 2012).

2.3.5 Mitigation strategies

Mitigation strategies employed during violent behaviours were discussed by Pérez-Fuentes et al. (2020). Their findings showed that in 64% of the cases, security was present during the incident, and 63% of victim nurses felt safe during the assault. Hence, more than half of nurse victims sought help rather than responded passively. These findings reflect the low prevalence of reported WPV discussed earlier in this chapter (Section 2.3.1), where 11.8% of nurse participants reported experiencing WPV. Conversely, the study by Gunaydin and Kutlu (2012) illustrated

that 75% of nurse victims were not aware of protocols and procedures for reporting WPV, with 52.7% not seeking support from authorities, including security personnel. These findings might reflect the much higher prevalence of WPV found in Gunaydin and Kutlu (2012) (64.1%), when compared to Pérez-Fuentes et al. (2020) (11.8%).

In the study by Jiao et al. (2015), participants outlined how medical errors and scandals communicated through mass media contributed to distrust in the healthcare system, consequently instigating WPV. The authors discuss the importance of unbiased media reporting to rebuild the image of nurses as trustworthy and respected professionals. It was also identified that 46.8% of nurse victims reported that managers investigated incidents, further encouraging nurses to report future incidents. Conversely, the majority of nurse victims (amount not specified) in the study by Sato et al. (2013) perceived managers as unwilling to defend nurses, and this was in fact correlated with underreporting (p <0.0001).

These findings suggest the importance of enhancing awareness of protocols which deal with WPV through nurse education and training programmes, even for managers, to support their staff and mitigate WPV. Furthermore, calling security personnel/ higher authorities during violent incidents should be encouraged.

2.4 Theoretical frameworks

Theoretical frameworks not only introduce the researcher to any existent theories/knowledge, but also provide new perspectives to understand and examine a phenomenon (Hoeck & Delmar, 2018). The ‘Interactive Model of Workplace Violence’, an explanatory model developed by Chappell and DiMartino (1998), and the ‘Theory of Planned Behaviour’, developed by Ajzen (1991) were used to guide

this research. These theories were selected based on their adequacy and appropriateness in targeting this study's objectives in the local context.

2.4.1 The Interactive Model of Workplace Violence

This model considers the occurrence of WPV as a multifactorial phenomenon. It proposes that interactions of various risk factors, including those related to the perpetrators, victims, and environment/situation (Table 2.12), are related to the occurrence of WPV. Furthermore, knowledge of these interactions aids in the greater likelihood of this phenomenon to be prevented and, ultimately, diminished.

Table 2.12

Risk factors which increase the likelihood of WPV as suggested by Chappell and DiMartino (1998)

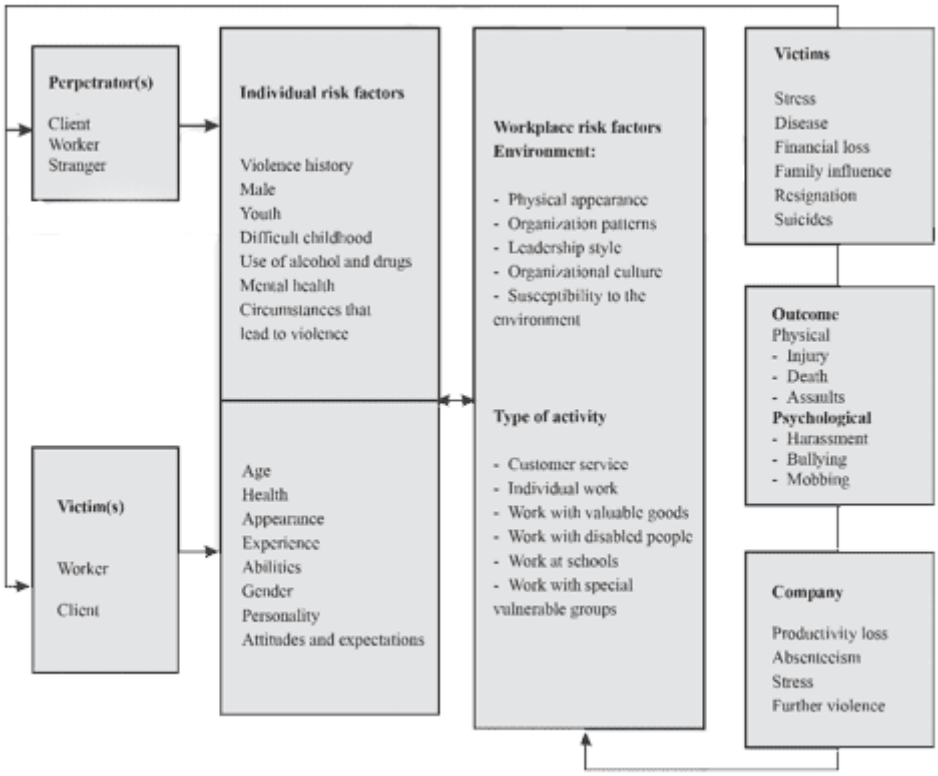
Demographic characteristics related to perpetrators	Demographic characteristics related to victims	Situations/ environment within which perpetrators and victims of violence interact
Being a young male	Being a young female	Structural designs
Having psychological problems	Being less experienced	Job organisations which may be perceived as confusing or busy
Consuming drugs	Being in a uniform which identifies an occupation	Victims working jobs which provide service to others, especially to vulnerable and disabled individuals
Having a troubled childhood	Physical appearance	Working alone
Having a history of violence		

This model also demonstrates the adverse consequences on victims of WPV, which not only affect the personal self, but also penetrate through the workplace, familial, and societal relationships of the victim. At a personal, familial and societal

level, the authors discuss how victims are at increased risks of psychological illnesses which demotivate individuals and reduce their self-confidence, consequently leading to fatal accidents, disabilities and suicides. In terms of workplace, authors identify correlations between victims experiencing WPV and increased absenteeism and stress, reduced productivity, staff turnover and resignations. Figure 2.3 summarises this model.

Figure 2.3

The Interactive Model of Workplace Violence as proposed by Chappell and DiMartino (Rodríguez & Paravic, 2013)



This model offers an excellent framework which guides research related to WPV occurring in the health sector (Rodríguez & Paravic, 2013). This framework was used to guide the researcher in identifying factors which contribute to WPV amongst ward-based nurses, locally. Furthermore, correlations between encounters

of WPV and adverse effects on nurses' well-being, as illustrated by this model, shall be identified and discussed in this study.

2.4.2 The Theory of Planned Behaviour

This model assumes that a particular behaviour is determined by one's intention to conduct the behaviour. The three factors which determine intention, and ultimately, contribute to the actual behaviour are: (1) behavioural attitudes, in which intention is determined by how one perceives the behaviour; (2) subjective norms, which are the individual's perceptions on whether others would support or oppose the behaviour; and (3) perceived behavioural control, which is the perceived difficulty or ease in performing the behaviour (Ajzen, 1991)

This model will guide the researcher in identifying nurses' responses to WPV in terms of under/reporting violent incidents. The researcher will determine whether these three factors determine the likelihood of under/reporting amongst nurses working in local hospital wards.

2.5 Gaps in research

Studies retrieved from this literature review have shown that the lack of recent studies on WPV concentrating solely on ward nurses is a major gap in literature. This further confirms the need for this study. Focusing on ward settings is essential to determine the nature and magnitude of the problem. Since no studies addressing ward-based WPV in nursing have been conducted locally, the local situation with regard to this phenomenon, along with strategies to mitigate the effects and risks of WPV is not known. Hence, this study aims to address this gap in local literature.

2.6 Conclusion

This chapter outlined the main themes derived from literature retrieved addressing external in-hospital WPV towards nurses. Methodological limitations within retrieved studies which might have induced potential biased findings were explored. Furthermore, theoretical frameworks which address this study's aim were discussed in light of this study.

Limitations to this literature review were mainly due to the lack of literature solely addressing adult ward-based WPV. Furthermore, the author acknowledges that the sole use of studies published in the English language might have posed limitations since this might have potentially omitted relevant articles published in other languages.

Literature findings highlighted that the overall incidence of external in-hospital WPV experienced by nurses is relatively high, with verbal WPV being more prevalent than physical. Findings have shown that patients and relatives were identified as the main perpetrators of violence, and demographic factors such as gender, age, work experience, employment type and level of education were considered as significant determinants of WPV. Delayed attention and unsatisfactory treatment outcomes were perceived as high-risk situational factors which contributed to WPV. Overall, nurses responded passively to WPV, with the majority failing to report the incident to higher authorities. Impacts on nurses' well-being focused mainly on psychological health. Only one study reported correlations between occurrence of WPV and declined physiological health. Another study reported feelings developed towards the workplace when encountering WPV, where these were not affected. Impacts on familial and societal relationships were not identified in this review, yet shall be addressed in the following chapters. Finally, mitigation

strategies were identified and discussed in light of their impacts in implementation and prevalence of WPV. The following chapter outlines a detailed description of the research method employed for this dissertation.

Chapter 3

Methodology

3.0 Introduction

This study aims to investigate the prevalence of WPV in adult hospital wards, and how nurses respond to WPV from patients and/or relatives, along with their reported well-being. A questionnaire-based, descriptive, cross-sectional design was used to address the aim of this study. The relevance for undertaking this approach shall be outlined. Furthermore, the population of interest, the research tool used, validity and reliability of tool and methods for data collection and analysis shall be discussed. Finally, ethical considerations conducted before initiating this research project shall be addressed.

3.1 Operational Definitions

Operational definitions are necessary to ensure that terms used in a study are understood in the same way by all involved in a study, including readers (Slife et al., 2016). Table 3.1 shows the operational definitions for this study.

Table 3.1

Operational definitions developed for this study

Term	Operational definition
WPV	This study shall address only physical and verbal WPV since these are the most predominant forms of WPV in healthcare (Kumari et al., 2021).
Verbal WPV	This incorporates threats, abuse, exaggerated arguments and offensive comments in the workplace (Kumari et al., 2021).
Physical WPV	This incorporates slapping, beating thrashing, vandalizing and attack with weapons (Kumari et al., 2021).
External WPV	WPV originating from patients and/or their relatives.
Local hospital wards	These incorporate adult wards which are situated in the local acute state-owned general hospital (with exceptions, which shall be discussed later on in this chapter). These include medical, surgical, cardiology, infectious disease, diabetic, orthopaedic, urology and neurology settings.

3.2 Research Approach

Leedy and Omrod (2001), stated that research approaches are frameworks which guide a researcher throughout a study. The previous chapters of this study discussed how local literature addressing external ward-based WPV towards nurses is lacking. Therefore, the research approach selected needed to provide the researcher with a broad overview of the local scenario, rather than delving deep into the subject, which would have emerged through a qualitative approach. Findings generated through the quantitative approach, would then represent the social phenomenon. The interest of the researcher lay in acquiring data which identified the occurrence of WPV along with nurses' responses and well-being towards aggression. Hence, a quantitative approach was deemed appropriate for this study. This approach allowed for the observation and measurement of variables from large population sizes through statistical and numerical data analysis (Creswell & Creswell, 2018).

Quantitative research is essentially deductive in nature; an assumption/hypothesis for a particular phenomenon is made, this assumption is tested, findings are generated and analysed, and conclusions which may or may not support the assumption are made (Creswell & Creswell, 2018). Based on findings from the literature review and as guided by the two models discussed in the previous chapter, the following assumptions/hypotheses were formulated for this study:

- Verbal WPV occurs more frequently than physical WPV.
- Demographic characteristics are related to the occurrence of external adult-ward based WPV.
- Characteristics inherent to perpetrators, and in-hospital situational and environmental factors are perceived as determinants for the occurrence of external adult-ward based WPV

- Nurses' responses towards WPV are more likely to be passive (tend to do nothing/walk away/ not seeking help/underreporting).
- Reasons for underreporting were determined by behavioural attitudes, subjective norms and perceived behavioural control.
- External WPV induces adverse effects on nurses' well-being (personal and psychological well-being, familial and societal relationships and/or feelings towards the workplace).
- Mitigation strategies targeted towards lessening WPV are perceived as effective amongst nurses.

3.2.1 Philosophical Worldviews

Prior to initiating a study, the researcher must reflect on the philosophical worldviews brought to the study topic (Creswell & Creswell, 2018). Philosophical worldviews, or research paradigms, are a set of beliefs which inform the researcher's actions throughout the study (Rehman & Alharthi, 2016). Each worldview consists of a particular ontology, epistemology and methodology. Whilst the ontology determines the nature of reality, epistemology refers to the relationship between the researcher and the reality (the knowable). The methodology determines the process by which the researcher acquires knowledge about reality (Rehman & Alharthi, 2016).

Post-positivism, which is one of the four major paradigms, puts forth the notion that reality is external, and knowledge about reality is developed through objective measurements (Creswell & Creswell, 2018). This paradigm adopts a deterministic philosophy with the premise that outcomes are probably determined by causes. This paradigm is also reductive in nature, meaning that findings are reduced and generalised to the population of interest (Creswell & Creswell, 2018). The post-

positivist worldview challenges the traditional positivistic paradigm which assumes that reality is regular and ordered, and exists independently from one's observation. Post-positivists *"recognise the impossibility of total objectivity"* (Polit & Beck, 2010, p.15) and view objectivism as a goal which the observer strives to achieve.

Post-positivist ontology addresses realism, that is, the notion that reality exists out there, and is independent of observers' perception of it (Rehman & Alharthi, 2016). Post-positivist epistemology is dualistic; the researcher and participants are independent of each other, and objectivistic; the researcher merely observes the phenomenon without influencing it at the time it is being observed. Post-positivist methodology focuses on identifying relationships between variables of a particular phenomenon to accept or reject a theory/hypothesis (Rehman & Alharthi, 2016).

This study aimed to identify the prevalence, responses and impacts on well-being in relation to ward-based WPV. Although an objective epistemological approach was adopted during data collection, the researcher recognises that the study itself might have altered participants' thoughts or perceptions of the phenomenon post-data collection, hence the *"impossibility of total objectivity"* (Polit & Beck, 2010, p. 15). Therefore, a post-positivistic worldview was deemed appropriate to guide this research. This paradigm ascertains that any relationships between variables are identified and applied to the general and local population (Creswell & Creswell, 2018). In this study, adult ward nurses are the population to which these relationships would refer. Table 3.2 illustrates how post-positivism guided the researcher throughout the research process.

Table 3.2

An illustration of post-positivist ontology, epistemology and methodology guiding this research

Domain	Description
Ontology	The reality, that is, the presence of external WPV, the impacts it has on nurses' well-being and the nature of response towards WPV.
Epistemology	Findings emerged from closed- ended questions through self-administered questionnaires. The researcher had no contact with potential participants.
Methodology	Data collected was analysed and measured in numerical values to identify relationships between variables. Hypotheses generated were accepted or rejected accordingly.

3.2.2 Research Design

As defined by Creswell and Creswell (2018), research designs are strategies of inquiry which inform the research process. Survey research generates numeric descriptions of prevalence and interrelations of variables of a particular phenomenon as well as actions, opinions and attitudes of a population (Polit & Beck, 2010). Survey research is a branch of non-experimental/observational research which, unlike experimental research, does not involve the researcher's manipulation or assignment of variables amongst participants. Conversely, this design requires the researcher to observe the relationships between variables as they naturally occur (Polit & Beck, 2010).

In terms of time horizons, survey research can be cross-sectional or longitudinal (Creswell & Creswell, 2018). Whilst cross-sectional designs attempt to collect data at one specific time period, longitudinal designs acquire data at multiple periods over an extended time frame. The former enables the researcher to acquire

data relating to prevalence and relationships amongst variables at a single point time. These factors are challenging to determine in longitudinal designs, as unlike in cross-sectional designs, variables are prone to change over the course of study (Creswell & Creswell, 2018).

Cross-sectional designs can be either analytic or descriptive (Wang & Cheng, 2020). Whilst analytical studies focus on investigating associations between exposure and outcome and questions *why* a phenomenon has occurred, descriptive studies focus on the mere description of a phenomenon, such as prevalence, behaviour and attitudes towards that phenomenon (Kesmodel, 2018).

Since this study aims to collect and analyse descriptive data pertaining to prevalence of WPV, along with nurses' responses and reported well-being towards WPV at one point in time, this research project employed a descriptive, cross-sectional survey design. Such a design allows data collection of multiple variables at a single time frame, hence enabling the researcher to analyse multiple exposure and outcomes simultaneously (Wang & Cheng, 2020). These factors provide a platform for secondary analysis, that is, the testing of new hypotheses or research questions by utilising data obtained from previous studies. Nonetheless, this design presents weaknesses which include its inability to establish causal inferences between variables, risk of survey fatigue and its susceptibility to bias involving participants, social-desirability, non-response and recall bias, which limit accuracy of findings (Wang & Cheng, 2020).

3.2.3 Research Method

Research methods describe modes of data collection, analyses and interpretation within a study (Creswell & Creswell, 2018). Quantitative techniques

for data collection require the researcher to know exactly what kind of data needs to be acquired, and structure questions accordingly so as to acquire such data (Polit & Beck, 2010). Survey designs utilise questionnaires and interviews, both referred to as *instruments* of data collection, as methods to acquire data (Creswell & Creswell, 2018). The two differ as the former is self-administered, meaning that the respondent answers questions in the absence of the researcher rather than through contact (face-to-face or via telephone) as occurs in the latter. This ensures a greater possibility of perceived privacy and anonymity, hence there is less chance of responses being biased to those being more socially acceptable. Moreover, questionnaires allow the researcher to reach a larger sample of participants, yet potentially yield to lower response rates than interviews (Wang & Cheng, 2020).

Given the time constraints for this research project, and the researcher's desire to ensure utmost independence from participants, questionnaires were the chosen method for data collection in this study, ensuring participant anonymity and confidentiality. As described by Polit and Beck (2010), questions in questionnaires may be either closed-ended or open-ended. Whilst the former is characterised by fixed, prespecified response alternatives, the latter allows for more flexibility in participant's responses. This research project utilised closed-ended questionnaires for data collection; mostly because these lead to a general description of the actual state of a phenomenon (Polit & Beck, 2010). Although the author acknowledges the major limitation closed-ended questionnaires pose; the inability to capture 'rich' data from participant responses, the choice of this method for this study over open-ended questionnaires is regarded as one which ensures higher rates of response. This is mostly due to participants' preference to choose from given options rather than composing written responses (Polit & Beck, 2010). Further details regarding the

tool used for this study along with the method used for data collection and analysis shall be discussed in the following sections.

3.3 Participants and Research Setting

Polit and Beck (2010) assert the importance of obtaining a representative sample whose characteristics are at close proximity to the target population. These authors define the target population as "*the entire population in which a researcher is interested"*. Furthermore, the quantitative researcher must strive to obtain the largest sample attainable as the "*larger the sample, the more representative it is likely to be*" (Polit and Beck, 2010, p. 316). Both these factors minimise the risk of acquiring inaccurate findings which cannot be used to represent or be generalised to the target population.

Table 3.3 and Table 3.4 show the eligibility criteria for participants in this study along with the rationale for inclusion or exclusion criteria, respectively. For this study, participants were recruited from wards in the local acute state-owned general hospital. This was considered as the target population and included 426 nurses. Information regarding how this amount was determined is discussed in the following section). Since the individuals making up the target population were situated in one hospital and the amount of these individuals was of manageable size, the researcher opted to select the total target population as participants for this study. Through adopting this method, the present researcher was able to overcome limitations involving generalisability and representativeness (Creswell, 2003).

Table 3.3

Inclusion criteria for this study, with rationale

Characteristic	Inclusion criteria	Rationale
Nurses' demographic characteristics	Nurses who occupy the position of enrolled nurses (ENs), staff nurses (SNs) and senior staff nurses (SSNs); work day and/or night shifts at full-time, part-time or reduced hours; are aged 18 and over; and having any gender and nationality.	These characteristics represent the target population for the present study
Workplace setting	Nurses who work in adult, local hospital wards (in Malta)	This was the setting of interest for the present study

Table 3.4

Exclusion criteria for this study, with rationale

Characteristic	Exclusion criteria	Rationale
Nurses' grade	Charge nurses (CNs)	These were appointed as intermediaries for this study (as will be discussed further in Section 3.4) and were in direct contact with the researcher
	Departmental nursing managers and practice nurses	Locally, such nurses are not assigned to any particular wards.
Workplace setting	Nurses working in the same ward as the researcher.	This ensured researcher independency from potential participants, avoiding any conflicts of interest
	Nurses working in wards having acute clinics or admission rooms.	This ensured that nurses' responses were solely based on ward-based WPV and not influenced by any WPV experienced in an out-of-ward context.
	Nurses in the relieving pool	This ensured that exposure to ward-based WPV was as even as possible
	Nurses working in emergency departments, intensive care units, obstetrics, paediatric, psychiatric and outpatient settings	Setting of interest was an adult, inpatient, ward-based setting
	Nurses working in Maltese private hospitals and/or Gozitan state-owned and/or private hospitals.	These environments and work practices therein differ greatly between themselves and from the local acute hospital

Downes et al. (2016) assert the importance of establishing a method of addressing non-responders in a cross-sectional study. Since the researcher did not have access to obtain demographic characteristics of the whole target population for this study, methods to identify characteristics of non-responders and to address these individuals, could not be established. The researcher recognizes this factor as a limitation in exposing the study to non-response bias.

3.4 Data Collection

Data collection took place through close-ended self-administered questionnaires. Paper-based questionnaires were used rather than web-based questionnaires, as the former ensure higher response rates, despite being less cost-effective (Kongsved et al., 2007; Ebert et al., 2018). The choice of paper-based questionnaires also assured that those having limited access to, or find it challenging to use the internet are not indirectly excluded from the study.

Distribution of questionnaires and data collection was initiated once the researcher sought permission from the local state-owned hospital authorities and the local ethics committee to access nurses working in local hospital wards (further details in Section 3.9). For this research project, distribution of questionnaires occurred via intermediaries. This ensured that direct contact between the researcher and participants was avoided and participant anonymity was safeguarded. As appointed by the Data Protection Officer (DPO) of the local state-owned hospital, the charge nurses (CNs) (or their delegates) of each eligible ward were to act as intermediaries for nurses working in their respective ward. The researcher sought written consents from CNs of their respective eligible wards via an Intermediary Agreement Letter (Appendix A) to act as intermediaries. The Intermediary Agreement Letter included the study's objectives, and information regarding the role

of the intermediary and eligible participants; this was also explained verbally to each CN. A copy of 'Participant Information Letter' (Appendix B), the questionnaire (Appendix C) and the 'Data Protection Clearance Letter' (Appendix D) which proved clearance from the hospital's DPO to proceed with the study, was presented to CNs prior to seeking their consent. The researcher acknowledges that CNs acting intermediaries to their respective wards might pose limitations related to conflict of interest; as CNs would approach their nurses with questionnaires, nurses who might not want to participate might feel obliged to do so when approached by their superior rather than decline participation.

A total of 426 questionnaires were distributed amongst CNs during the first week of November 2022. The number of eligible nurses working in local hospital wards (that is, the target population) was acquired from CNs of respective wards prior to questionnaire distribution. Each eligible participant received a 'Participant Information Letter' (Appendix B) which explained the purpose and content of the questionnaire as well as instructions on participation, along with the questionnaire itself. These were distributed to the participants by their intermediary in small, unsealed envelopes. Each participant was asked to answer *one* questionnaire voluntarily. Participants were also informed that every self-administered questionnaire would take approximately 10 to 15 minutes to complete. Each ward nurse was instructed by their intermediary to seal their questionnaire and place it, filled or unfilled, in the small envelope. The use of the small, sealed envelopes ensured that the filled-in questionnaires could not be opened and/or seen by colleagues and/ or CNs working in the same ward, hence preserving participant anonymity. Small, sealed envelopes were then to be collected by the CN in a larger envelope which the researcher specifically provided for each ward. The use of the

larger envelopes, which were kept in the CNs' office of each respective ward, ensured that the smaller, sealed envelopes were not mislaid at any point during the participation period. Both the small and large envelopes were labelled with this study's title, in a printed form, and had no labels or markings indicating ward name.

The first round of data collection took place during the third week of November 2022. Intermediaries were also handed paper-based reminders (Appendix E) to be given to all eligible participants. The purpose of these reminders was to enhance response rates, ultimately preventing the risk of non-response bias. The researcher proceeded to collect questionnaires from CNs for the second and final time in the week ending November and starting December 2022.

Once collected, data was transferred to and stored in an excel spreadsheet, which was password protected in an encrypted format. The questionnaires were placed in a locked cupboard which could only be accessed by the researcher. Upon completion of the study, the questionnaires will be destroyed.

3.5 Research Tool

A thorough online search related to tools addressing WPV in healthcare identified two questionnaires; the WHO (2003) 'Workplace Violence in the Health Sector Country Case Study' questionnaire, and Kumari et al.'s (2021) 'Questionnaire to Evaluate Workplace Violence in Healthcare Settings'. Upon careful consideration and discussion with the supervisor, it was decided that Kumari et al.'s (2021) questionnaire would be adequate for this study. The WHO (2002) questionnaire was found to be lengthy and this would potentially affect response rate. Consideration was also given to Kumari et al.'s (2021) critique of the tool by WHO (2002) which was found to be time-consuming and failing to address

mitigation strategies for WPV. The latter domain is unique in Kumari et al.'s (2021) tool, and one of this study's objectives.

Kumari et al. (2021) developed a tool aimed at enabling researchers to analyse relevant domains pertaining WPV occurring in healthcare settings, in one, single tool (Kumari et al., 2021). To the knowledge of the researcher, this newly developed tool has not yet been used by researchers to assess WPV; it was however validated through reliability testing and expert review as discussed in the following section. Permission to utilise and amend this tool was sought and granted by Dr Piyush Ranjan (Appendix F), a corresponding author for this tool.

The questionnaire consists of two parts; the first part addresses participant demographic characteristics, whilst the second part comprises of 37 items incorporated in the following five domains of WPV (Kumari et al., 2021):

A. Forms of Violence (*2 items*)
B. Impact of Violence on Nurses (*5 items*)
C. Reporting of Incidents (*7 items*)
D. Mitigation Strategies (*11 items*)
E. Risk Factors to Health Workers (*12 items*)

Survey scales, which incorporate response options available within a survey, varied between and within the 5 sub-sections. These scales, along with a description of both parts of this tool are displayed in Table 3.5.

Table 3.5

A description of contents in the 'Questionnaire to Evaluate Workplace Violence in Healthcare Settings' developed by Kumari et al. (2021)

	Subscale	Description
Part A	**Demographic Data**	Characteristics asked included; age, gender, highest degree, years of experience, and area and department of workplace.
Part B	**Section A: Forms of Violence**	This domain assesses the prevalence of physical and verbal WPV occurring in healthcare settings (in this case ward settings). Definitions characterising both types of WPV were provided. To assess frequency, a 6-point scale, ranging from 'Nearly daily', 'About once a week', 'About once a month', 'About once every six months', 'About once a year' to 'Never', and a 5-point scale ranging from 'About once in a month or more', 'About once every six months', 'About once a year', 'Less than once a year', to 'Never', were used for verbal and physical WPV respectively.
	Section B: Impact of Violence on Nurses	This domain assesses the impacts of WPV on its victims. It comprises of two parts; the first part (*1 item*) questions the feelings developed by victims towards workplace after encountering WPV; the second part (*4 items*) inquiries the impacts of WPV on one's well-being in terms of personal and psychological health, and family and societal relationships, using a 3-point scale ranging from 'Not/mildly Affected', 'Moderately Affected' to 'Severely Affected'.
	Section C: Reporting of Incidents	This domain assesses reporting behaviours. It comprises of two parts: the first part (*1 item*) questions the victim's comfort in reporting the incident using a 5-point Likert scale ranging from 'Strongly Disagree', 'Agree', 'Neutral', 'Agree' to 'Strongly Agree'; the second part (*6 items*) addresses reasons for underreporting using a 3-point scale ranging from 'Significantly', 'Somewhat Significant' to 'Insignificantly'.
	Section D: Mitigation Strategies	This domain assesses victims' perceptions of mitigation strategies which can be useful in preventing the violent incident. A 3-point scale ranging from 'Very Useful', 'Somewhat Useful' to 'Not Useful' was used.
	Section E: Risk Factors to Healthcare Workers	This domain assesses victims' perceptions of risk factors which contribute to WPV. This domain uses a 3-point scale ranging from 'Very Important', 'Somewhat Important' to 'Not Important'.

Minor amendments were made in this research tool to adequately satisfy this study's purpose. Changes made were based on the findings from the literature review and discussed with the research supervisor and two local experts, who are academics and nurses by profession. The changes implemented are displayed in Table 3.6, with rationale.

Table 3.6

Amendments done to the research tool, with rationale

	Subscale	Amendments	Rationale
Part A	**Demographic characteristics**	Changes made in demographic characteristics: • Options for 'Workplace setting/ specialisation' were removed. • Options for 'Position' ('Enrolled Nurse', 'Staff Nurse', and 'Senior Staff Nurse'), 'Employment Type' ('Full-Time', 'Part-Time', and 'Reduced Hours'), 'Shift Type' ('Days and nights', 'Days only', and 'Nights only') and 'Country of Origin' ('Malta' and 'Other') were included.	This ensured that wards were not identifiable by the researcher. The researcher had an interest in identifying how these characteristics relate to prevalence of WPV.
Part B	**Awareness of Local Protocols**	An additional section was added between the two parts of the original questionnaire. This part, referred to as 'Part B' comprised of one item This assessed whether participants were aware of the availability of the 'Incident Report Form' and the 'Violence/Harassment Incident Report Form 'to report WPV.	Addressing awareness of local protocols allowed the researcher to identify whether nurses working in local hospitals were able to report WPV adequately.

Table 3.6 *(continued)*

Amendments done to the research tool, with rationale

Part C	An option was added between 'Section A' and 'Section B' in the third part of the questionnaire. This option stated that participants who answered 'Never' for encountering both physical and verbal WPV, could skip Section B and C, and continue with Section D and E.		Since Section B and C address well-being and reporting behaviours, those participants who never encountered WPV might answer these questions based on hypothetical situations, hence provide inaccurate results. Since 'Section D' and 'Section E' address perceptions of mitigation strategies and risk factors, these could have been answered even by those who never encountered WPV.
	Section B: Impact of Violence on Nurses	An additional item was added under Section B. This assessed how participants responded to the incident of WPV. Options included 'Took no action', 'Told patients/relatives to stop', 'Told friends/family/colleague', 'Proceeded to reporting to seniors/ management', 'Completed the 'Incident Report Form'', 'Completed the 'Violence/Harassment Incident Report Form'', 'Sought counselling', 'Took time off from work', and 'Other'	Since this questionnaire addressed responses to WPV based only on reporting behaviours, the researcher added this item to assess other possible responses to the incident in addition to reporting WPV.
	Section C: Reporting of Incidents	An additional two items were added under Section C. These assessed whether victims did not report the incident because they 'accepted encounters as part of the job' and/or because 'patient and/or relative stated that they did not intend harm'.	These options enabled the researcher to further determine nurses' attitudes (as per Ajzen's Theory of Planned Behaviour) towards reporting.
	The terms 'patients and/or relatives' were included by the present researcher in this tool. Furthermore, terms which identified healthcare professionals were changed to 'nurse(s)'.		This was done to put the questionnaire in the context of study.

The amended questionnaire (Appendix C), which was ultimately used for this study, consisted of three parts; 'Part A' included participant demographic data, 'Part B' incorporated one item addressing awareness of local protocols, and 'Part C' included 40 items which were incorporated within five sections, representing the domains of WPV.

In the previous chapter, it was shown how the 'Interactive Model of Workplace Violence (Chappell & DiMartino, 1998), and the 'Theory of Planned Behaviour' (Ajzen, 1991) guided this research. For this study, both models were implemented to the research tool to adequately address this study's aim. The method of their implementation is outlined in Table 3.7 and Table 3.8, respectively.

Table 3.7

The implementation of the 'Interactive Model of Workplace Violence' in the research tool

The Interactive Model of Workplace Violence	
Summary of Model	**Implementation of Model into the Tool**
Point 1: This model considers the occurrence of WPV as a multifactorial phenomenon: risk factors which enhance the incidence of WPV include those related to the victims, and situational/environment surroundings.	The researcher identified relationships between demographic data (Part A of the tool) and incidence of violence (Section A of the tool). Furthermore, nurses' perceptions of situational and environmental factors which contribute to WPV (Section E of the tool) were assessed.
Point 2: Encounters with WPV lead to adverse outcomes related to personal self, familial and societal relationships, and the workplace	The researcher analysed Section B of this tool (Questions B1- B5) to identify whether occurrence of WPV affected nurses' well-being (physiological and psychological, familial and societal relationships and feelings towards the workplace).

Table 3.8

The implementation of the 'Theory of Planned Behaviour' in the research tool

Theory of Planned Behaviour	
Summary of Model	**Implementation of Model into the Tool**
Behavioural attitudes, subjective norms and perceived behavioural control are the three factors which ultimately determine one's behaviour.	The researcher identified whether behavioural attitudes (Question C1, C2, C3 and C4), subjective norms (C5, C6 and C9), and perceived behavioural control (C7 and C8) were contributing factors for reporting incidents to seniors/ management, and/or through the use of the 'Incident Report Form'/ 'Violence/Harassment Incident Report Form' (Refer to Question B6 of the tool).

The present author recognised that none of these theories addressed mitigation strategies (Section D). However, the researcher acknowledged the importance of their recognition in preventing future incidents of WPV (Kumar et al., 2020), hence the role of mitigation strategies towards controlling WPV was included for analysis.

3.6 Reliability and Validity

Reliability, defined as '*the consistency with which an instrument measures the attribute'*, is one of the two major criteria which asses for the quality of a quantitative measure (Polit and Beck, 2010, p. 373). A reliable instrument is that which, when used repeatedly, produces outcomes which possess little variations. Additionally, a reliable instrument ensures that outcomes are accurate and '*reflect true scores'* (Polit and Beck, 2010, p. 373). In quantitative research, the three main aspects concerning reliability include stability, equivalence, and internal consistency. Internal consistency, which is the extent to which items in a tool measure the same

attribute, is the most used approach among researchers to determine reliability, and is measured by calculating the Cronbach's alpha. Kumari et al. (2021) measured reliability of their questionnaire by determining the Cronbach's alpha, scoring a value of 0.86. This was suggestive of a high internal consistency, since the normal range of values for Cronbach's alpha lie between 0.00 and +1.00, where the higher the value, the higher the internal consistency of a given instrument (Polit and Beck, 2010).

Validity is the second major criterion for determining the quality of a quantitative measure. It is described as the '*degree to which an instrument measures what it is supposed to measure'* (Polit and Beck, 2010. P. 377). One method of assessing for validity is through face validity. This refers to a subjective assessment of the tool as to whether it measures constructs it was designed to measure (Polit & Beck, 2010). Kumari et al. (2021) achieved face validity through expert review from healthcare workers from different departments. Locally, face validity was also attained from the Faculty of Health Sciences Research Ethics Committee (FREC) who reviewed the questionnaire before granting permission to initiate the study. However, three other determinants of validity are considered of greater importance, these being; content validity, criterion-related validity and construct validity (Polit & Beck, 2010). For this tool, Kumari et al. (2021) reported testing for content validity and construct validity.

The authors reported assessing for content validity using both qualitative and quantitative methods. Content validity is a measure of the extent to which the items in the instrument adequately address the construct(s) being measured. Qualitative

validity was carried out by a panel of eight experts who examined the items within the tool for necessity, relevance and clarity. The usefulness of each item was graded using a three-point scale (-1, 0, +1). Content Validity Ratios (CVR) values for each item were quantified using Lawshe's method. This method gives the minimum CVR required to determine whether each item is valid or not, and hence whether it should be retained (Zerati & Alavi, 2014). Relevance, clarity and simplicity were graded with the use of a four-point Likert scale, and scores were used to determine the Content Validity Index (CVI). This describes the '*extent of expert agreement'* (Polit and Beck, 2010, p. 378) and, together with CVR, is used to determine content validity. Kumari et al. (2021) reported that items generating CVI with a value below 0.7 were eliminated, whilst those between 0.7-0.79 were reviewed and altered by experts. This was indicative of adequate content validity, considering that an acceptable CVI for a panel incorporating eight experts should be at least 0.83 (Yusoff, 2019).

Construct validity, which questions whether the tools is measuring what it is expected to measure, was determined by exploratory factory analysis (EFA) with principal component extraction and varimax rotation with Kaiser normalization. This process aims to identify latent factors which influence the observable variables/items, and group the variables/items having the same attributes separately from those having different attributes (Polit and Beck, 2010). The total variance obtained from EFA was that of 67.491%, indicating good construct validity since an acceptable value for variance indicating validity should exceed 60% (Hair et al., 2005).

Since minor amendments were implemented to the tool developed by Kumari et al. (2021), the two local experts mentioned previously were consulted regarding the need to re-validate the questionnaire. Both experts reviewed the amendments made and commented that there was no need to re-validate the tool since the nature of the amendments made did not interfere with the tool's quality, validity and reliability. Furthermore, the content of the changes made were deemed as necessary by the experts to satisfy the purpose of this study.

3.7 Pilot Study

A pilot study is a preliminary test conducted before the actual study in order to test the research instruments and other methodological procedures under survey conditions (Gerrish & Lacey, 2010). The aim of this test is to identify any problems before initiating data collection. Kumari et al. (2021) reported expert review along with pre-testing of the questionnaire on healthcare workers from different specialities. Items were tested for clarity, need and relevance. The authors reported the removal of six items based on expert consultation and feedback, and adjustments on four items to reduce ambiguity (items not specified by authors).

The present researcher did not re-pilot this tool, since this was already done by the original authors. Instead, the two experts afore mentioned were consulted for final feedback, none of which suggested any further changes to the amended tool or any obvious source of bias.

3.8 Data Analysis

Data for this study was analysed using the Statistical Package for the Social Sciences Version 28 (SPSS-28), under the supervision of a professional statistician. *P*-values ≤ 0.05 were considered as statistically significant.

Initially, participant responses were manually inputted into an excel spreadsheet. Numerical codes were assigned for each part of the questionnaire (Appendix G shows the coding book developed for interpretation and analysis). For Part A of the questionnaire, each point from the items making up this section was assigned numerical values, with the exception of two items: 'age' and 'years of experience', since these were inputted as numbers in years by participants. Similarly, for Part B and C**,** each point on the scales making up these parts were assigned numerical values. Exceptions for this were applied in instances where an item enabled participants to select one or more options ('Question B1' and 'Question B4'). In such cases, each point within these items was assigned a 'no or 'yes' response, coded as '1' and '2' respectively. Therefore, in instances where participants selected an option from the items aforementioned, a code of '2' ('yes') was given, whereas if the participant did not select a given option, a code of '1' ('no') was given. Upon completing data input, data from the excel spreadsheet was imported into the SPSS-28 to create a data set which was ultimately utilised for analysis. Descriptive statistics and frequencies were generated for continuous and categorical variables respectively. Furthermore, the Chi-squared (x^2) test for independence and the Wilcoxon Signed Rank Test were statistical tests utilised to determine statistical significance between variables

3.9 Ethical Considerations

Ethical issues should be considered and addressed in research involving both animals and humans (Polit & Beck, 2010). This ensures that researchers abide moral concerns and respect towards subjects under study. Beauchamp and Childress (2009) identify four fundamental ethical principles, upon which medical ethics is rooted, and which should be considered before initiating a research process, these being *'autonomy', 'non-maleficence', 'beneficence'* and *'justice'.* This section shall outline how these four ethical principles were addressed and ensured throughout the study.

In context of research, autonomy is an individual's right to make informed and voluntary decisions on whether to participate in a study (Beauchamp & Childress, 2009). Decisions should be made after being provided with appropriate information, without feeling obliged to participate. In this study, each participant received an information letter (Appendix B) along with the questionnaire (Appendix C) which stated the purpose of the study and instructions on how to participate. Filling and submitting the questionnaire automatically denoted consent for participation. Participation for this study was entirely voluntary and participants were free to withdraw at any point, without any repercussions. This was stated in both the information letter and questionnaire.

Non-maleficence is described as doing no harm (Beauchamp & Childress, 2009). Due to the sensitive nature of this study, the possible risk of psychological harm through nurses' recollection of the experience was anticipated. Such risk is unavoidable as participants might recall first-hand WPV which may instigate distress. In order to minimise the risk of psychological harm, the information letter

contained a thorough description of the content of the questions within the questionnaire, notifying participants of potential triggers which may instigate psychological distress. A psychotherapist, who specialises in support and counselling at the local hospital, was also contacted prior to data collection. The psychotherapist agreed to offer her services, at no financial costs on the participant's or researcher's part, in the event that participants feel distressed due to participation in this study (Appendix H). Her details were included in the information letter so that participants were made aware of the available services.

Beneficence is the act of maximising benefit to those involved, in this case towards adult ward nurses (Beauchamp and Childress, 2009). The information letter clearly stated that no direct benefit will be offered to those who participate. However, both the information letter and questionnaire stated that nurses' views and contribution towards this study aided in providing a general understanding of adult, ward-based WPV locally.

Finally, justice, defined as the act of treating each individual equally, with fairness and respect (Beauchamp & Childress, 2009). In this study, justice was maintained through including all eligible participants.

Ethical clearance for this study was provided by FREC (Appendix I). Furthermore, before accessing ward nurses and commencing data collection, the researcher sought permission from the local acute state-owned hospital authorities, including the CEO, and medical and nursing director (Appendix J). At no point in the study were the participants asked for data which may divulge their identity. All questionnaires distributed were identical, without having any identification marks or

codes. Furthermore, neither the small nor the large envelopes which enclosed the information letter and questionnaires had any labels/markings which disclosed or identified the ward. This study was not registered or funded.

3.10 Reflexivity

Reflexivity in research refers to the positionality, subjectivities and biases which the researcher may introduce in a research study (Jamieson et al., 2022). It therefore potentially affects all kinds of research but qualitative study can be more vulnerable to it due to the nature of qualitative data collection and analysis. In quantitative research, data is considered to be objective since it is numerical. However, Jamieson et al. (2022) contended that this can be untrue if the numerical data emerge from attitudes, experiences and feelings. In this study, data may result from personal experiences or witnessing of WPV. It is therefore important to acknowledge one's position in the environment under study.

The position of the researcher of this study is that they are a nurse working in an adult general ward and therefore in an environment which is very close to where the study was conducted. Throughout the study, the researcher endeavoured to minimise the biases which could have been introduced by their position. In fact, the ward where the researcher works was not included for data collection so as to minimise the effect on participants; the presence of the researcher may have affected potential participants, who, being colleagues may have felt they had to participate and then fill in the questionnaire in the way they believed would 'assist' the researcher most. The same was applied during data collection, interpretation of findings discussion and establishing conclusions.

3.11 Conclusion

This chapter outlined the research method chosen for this study. A questionnaire-based, descriptive cross-sectional design was selected to address this study's aim and objectives. An amended version of the 'Questionnaire to Evaluate Workplace Violence in Healthcare Settings' developed by Kumari et al. (2021) was distributed, via intermediaries, to 426 nurses working in adult wards. This was commenced after permission was sought from the local acute state-owned hospital authorities and after ethical approval was obtained by FREC. Data was analysed using the SPSS-28 software. The following chapter shall present the results of this study.

Chapter 4

Findings

4.0 Introduction

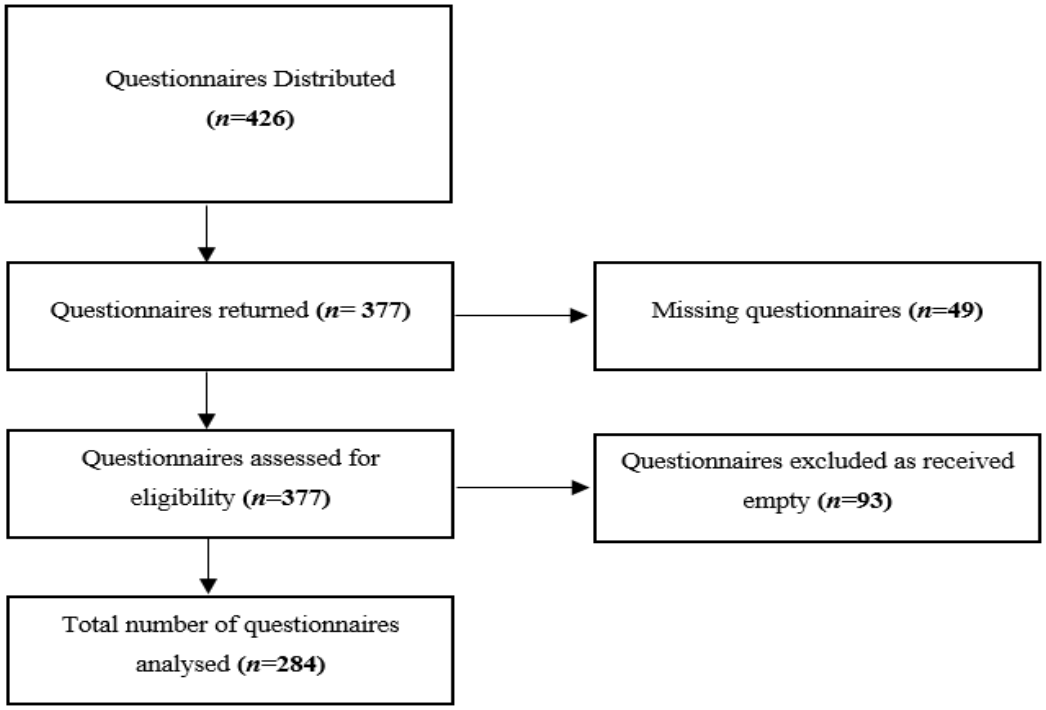
The aim of this chapter is to present and report findings gathered from the 'Questionnaire to Evaluate Workplace Violence in Healthcare Settings' (Kumari et al., 2021), which addresses the main domains of WPV. Statistical analysis was carried out using SPSS-28, which generated descriptives and frequencies for continuous and categorical variables, respectively. The x^2 test for independence was mainly utilised to identify relationships between categorical variables. At one instance, the Wilcoxon Signed Rank Test was utilised to identify correlations between continuous and categorical variables. A rationale for their use will be discussed. *P*-values $\leq$0.05 were considered to be statistically significant. An overview of the response rate and the demographic characteristics of participants in this study is presented. The following sections outline findings which are in line with this study's objectives; illustrated by tables and figures.

4.1 Response rate

The target population for this work consisted of nurses working in adult wards within the local acute hospital. A total of 426 questionnaires were distributed amongst these nurses and 377 (88%) were returned. Although the number of questionnaires collected should ideally be equal to that distributed, to ensure that no questionnaires are misplaced and hence no data is lost, this is not always the case. The missing questionnaires (*n*=49, 12%) were unaccounted for. Out of the 377 returned questionnaires, 93 24%) were excluded since they were returned empty. In conclusion, out of the 426 questionnaires distributed, 284 (67%) were eligible for analysis (Figure 4.1).

Figure 4.1

Process of identifying eligible questionnaires



To determine whether the response rate was adequate in providing reliable and representative results, power analysis using Raosoft® Sample Size Calculator was carried out. When provided with the total population, a confidence level of 95%, and the number of respondent nurses, a margin of error of +/-3.36% was generated from this calculator. The confidence level refers to the level of certainty on how accurately the sample size reflects the target population, whilst the margin of error represents the acceptable degree of deviation from the actual value (Polit & Beck, 2010). The smaller the margin of error, the higher the probability that findings are close to the actual value. As an acceptable margin of error is considered to be 5% (Adam, 2020), the margin of error attained for this study can be considered to be relatively small. This indicates that findings generated from this study's respondents

(*n*=284) possess adequate power in being reliable and representative of this study's target population.

4.2 Determining statistical techniques

This section provides the rationales which ultimately determined the researchers' choice for statistical tests utilised for this study throughout statistical analysis.

4.2.1 Defining variables

The majority of variables were categorical. Although variables assessed in scales, particularly Likert scales, are considered as continuous, this could not have been done for the utilised tool. This is because for scale items to serve as continuous variables, the distance between adjacent response choices must be equal in order to generate descriptive statistics adequately. This is ensured when scales have an adequate amount of response options, usually five or more, and two extreme poles with a neutral option, to ensure equidistance between each response option (Shreffler & Huecker, 2023). Since the options for the scales used in this tool were either discrete (Question 9, Section A, Question B1 and Question B6) or comprised of 3-point scales (Questions B2-B5, Questions C2-C9, Section D and Section E), equidistance between options could not be ensured, therefore scales were considered to be categorical.

The only continuous variables in this study were 'age', 'years of experience' and 'comfort in reporting'. Whilst the former two variables were inputted as numerical values by participants, the latter consisted of a 5-point Likert scale ranging

from ‘Strongly disagree’ to ‘Strongly agree’ which determined nurses’ comfort in reporting WPV (Question C1).

Descriptive statistics and frequencies were generated for continuous and categorical variables respectively. Values for Skewness to determine *‘the symmetry of distribution’* (Pallant, 2016, p. 72) were also generated for continuous variables. Values for Skewness which are higher than ‘0’ indicate that the distribution of values is clustered towards the left side, at the lower scores, whereas values smaller than ‘0’ indicate that the distribution is clustered towards the right side, at the higher scores (Pallant, 2016).

For the purpose of comparing groups to identify associations between variables, namely with prevalence of WPV, values for ‘age’ and ‘years of experience’ were grouped in categorical ranges as illustrated in Section 4.5.1 This was done since both variables are independent, so statistical techniques in SPSS regard these as categorical variables, and the researcher was unable to input this data as continuous values.

4.2.2 Testing for normality

The continuous variable ‘comfort in reporting’ was tested for normality. This is crucial in statistical analysis since it guides the researcher in selecting the appropriate techniques to analyse relationships between variables (Pallant, 2016). When testing for normality, one determines whether variables, particularly continuous, are normally distributed. Normal distribution is defined by a bell-shaped curve which is symmetrical, having the *‘greatest frequency of scores in the middle with smaller frequencies towards the extremes’* (Pallant, 2016, p. 75). When the

distribution of continuous scores is normal, parametric statistical tests are used, whereas when the distribution is not normal, or skewed, non-parametric tests are used. Testing for normality was conducted by using the Kolmogorov-Smirnov and Shapiro-Wilk tests. Both these tests assume that a *p*-value higher than 0.05 indicates normality (Pallant, 2016). The *p*-value for the mentioned variable scored less than 0.005 (p=<0.001), indicating skewed distribution of variables (Table 4.1). This demonstrated that non-parametric tests were to be utilised for further analysis involving this variable.

Table 4.1

Tests of Normality conducted for the variable 'comfort in reporting'

Tests of Normality						
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
I would be comfortable reporting WPV to competent authorities	.200	253	<.001	.882	253	<.001

a. Lilliefors Significance Correction

4.2.3 Statistical tests utilised

For this study, x^2 tests for independence were utilised to compare categorical groups. This test is useful when comparing or exploring relationships between independent and dependent categorical variables (Pallant, 2016). Pearson x^2 values and *p*-values were generated from this test. Whilst the former indicates a strong association between groups, the latter identifies whether the association is statistically significant (Pallant, 2016) (Table 4.2).

Table 4.2

Implications of what x^2 values and p-values represent (Pallant, 2016)

Value	Implications
Pearson x^2 value	The larger the Pearson x^2 value, the stronger the association between variables.
***p*-value**	Values <0.05 indicates an association which is statistically significant, that is, an association which was attributed to a specific cause rather than chance. If *p*-value is >0.05 the null hypothesis, which states that there is no relationship between variables, is accepted, whereas if the *p*-value is <0.05, the null hypothesis is rejected.

To identify correlations between 'comfort in reporting' (continuous variable) and 'occurrence of reporting (categorical variable) (Section 4.6.3), the Wilcoxon Signed Rank Test was utilised. As discussed by Pallant (2016), this non-parametric test is designed to compare one categorical independent variable having two levels and one categorical continuous variable. Since 'occurrence of reporting' comprised of more than two levels, it was deemed adequate to utilise this test for the comparison of occurrence with 'comfort in reporting'. Similarly to x^2 test, this test generates a *p*-value which determines the statistical significance between the two variables, that is between 'comfort in reporting' and 'occurrence of reporting'.

4.3 Demographic data

The demographic data collected for this study included adult-ward nurses' gender, age, highest academic qualification, years of experience, nursing grade, employment and shift type, and country of origin. In this study, findings of continuous variables; 'age' and 'years of experience' are depicted by histograms, whereas bar graphs outline the remaining categorical variables. For continuous

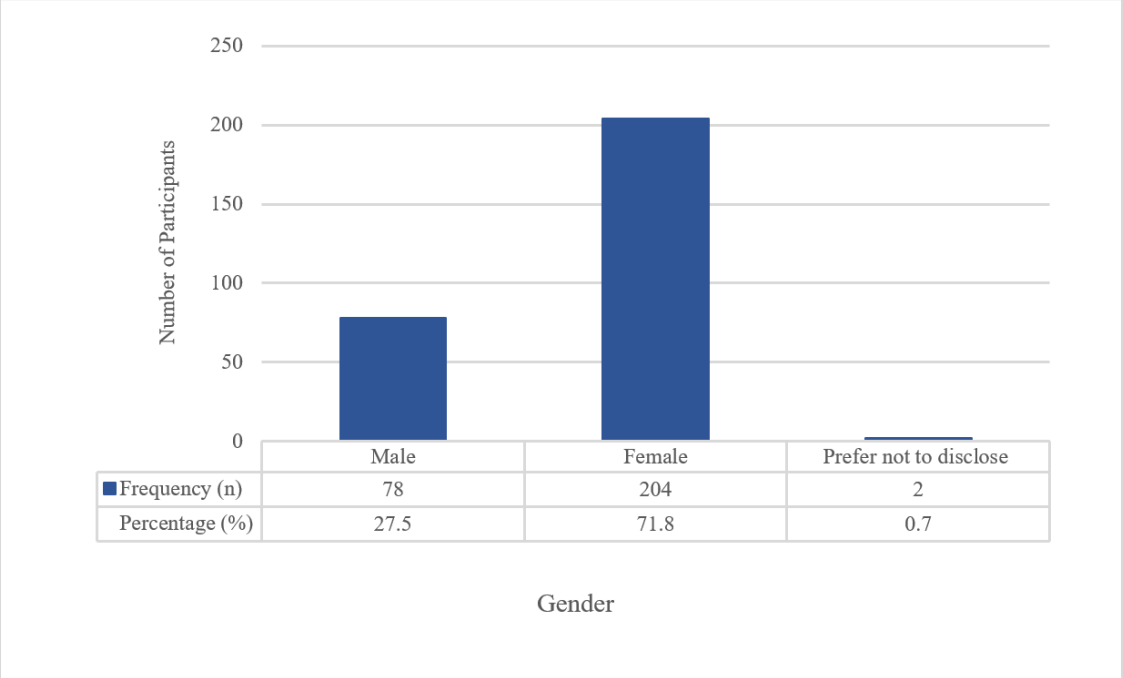
variables, median values are presented along with mean values, since the former is appropriated when presenting skewed data (Pallant, 2016) as will be discussed further on in this section. Numbers and percentages are used to report the findings from categorical variables. Table 4.3 summarises respondents' demographic characteristics.

4.3.1 Gender

There were 204 (71.8%) female respondents and 78 (27.5%) males. Two respondents preferred not to disclose their gender (Figure 4.2).

Figure 4.2

Bar graph outlining participants' gender frequencies



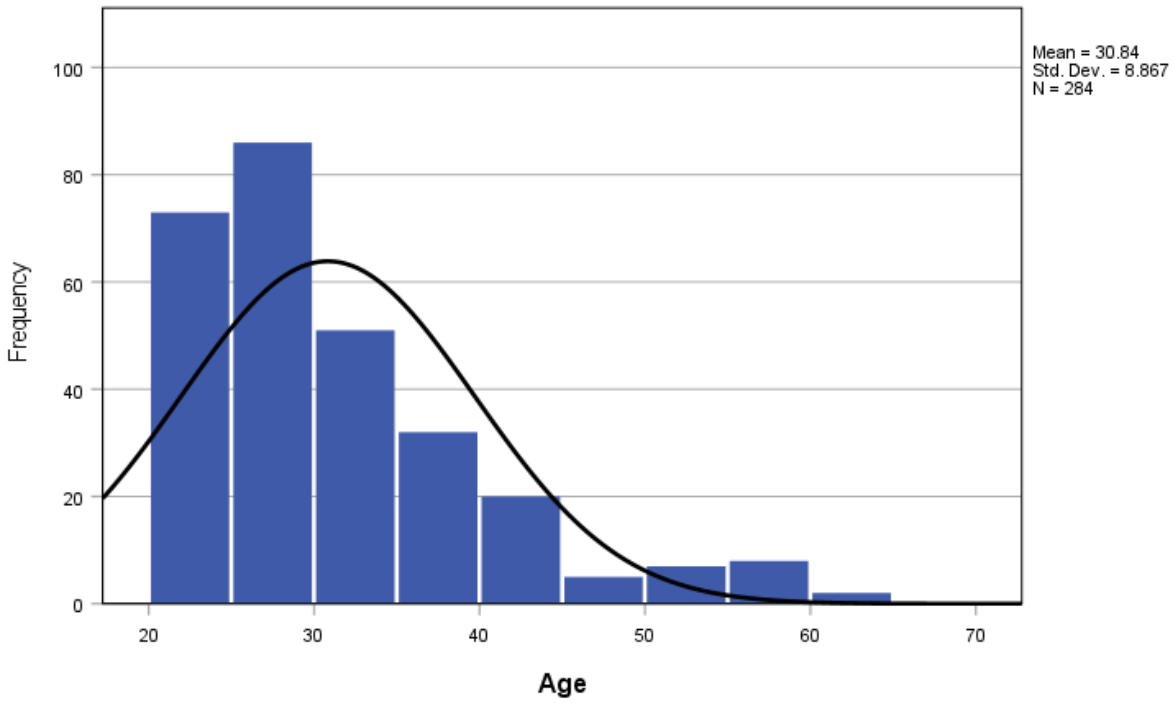
4.3.2 Age

Age distribution of respondents ranged between 20 and 58 years. The mean age for participants was 30.8 years (SD=8.87) with a 95% confidence interval (CI)

of 29.8 to 31.87, whereas the median age was 28 (Figure 4.3). In this case, the CI outlines the range of values that is 95% likely to contain the true mean value (Pallant, 2016). More than half the participant population were of a young professional age, since up to 75% (*n*=213) of the sample were aged between 20-35. Value of Skewness obtained for age was 1.387. This is evident in Figure 4.3, where the curve is clustered towards the left side at lower scores, further indicating the young professional age of participants.

Figure 4.3

A histogram outlining distribution of respondents' age



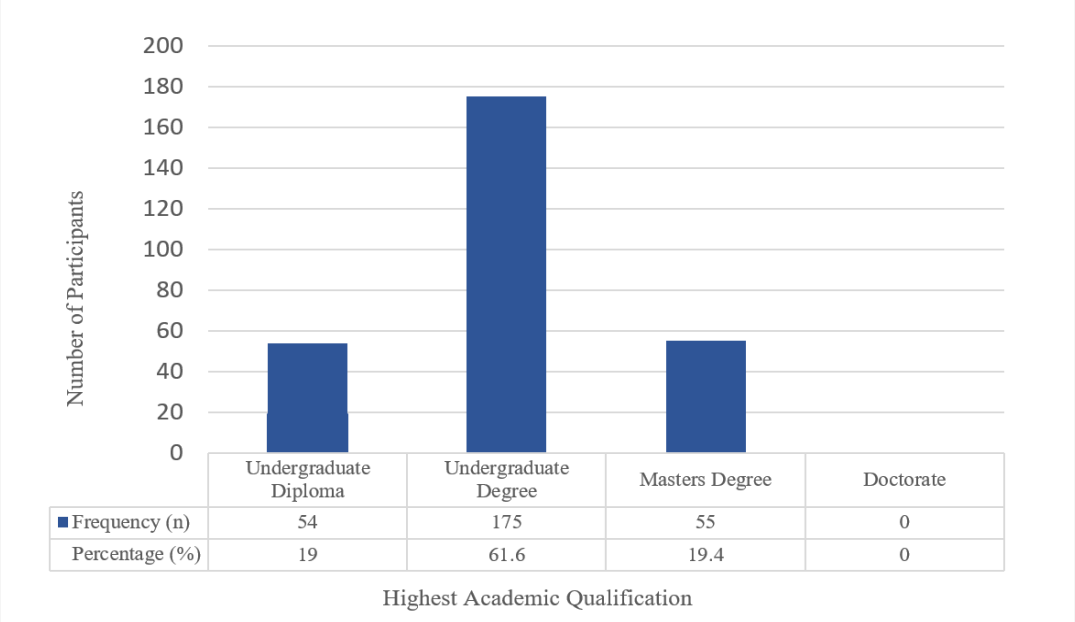
4.3.3 Educational Level

The majority of participants held an Undergraduate degree (*n*=175, 61.6%). A further 55 (19.4%) participants held a Master's degree, while 54 participants

(19%) held an Undergraduate diploma. None of the participants held a Doctorate (Figure 4.4).

Figure 4.4

Participant distribution of academic qualification according to gender

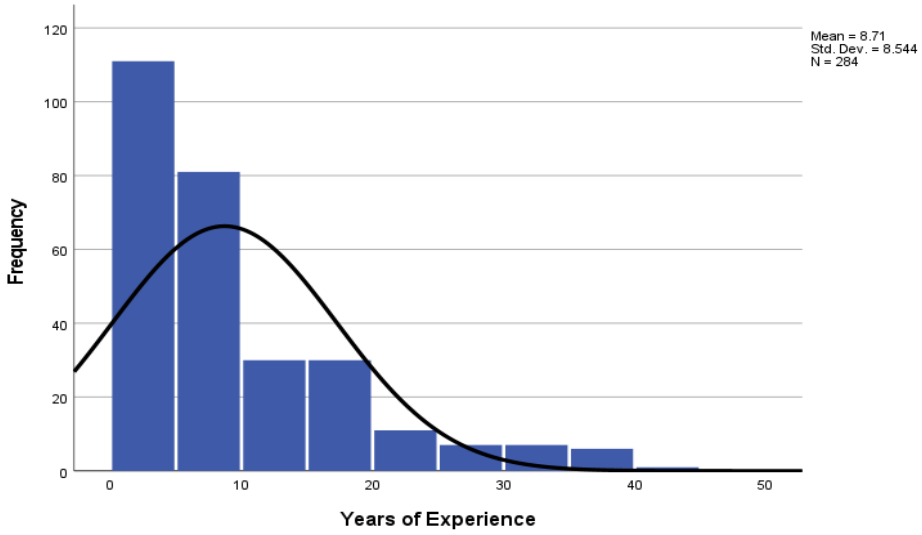


4.3.4 Years of Experience

The mean years of experience for participants was 8.71 (SD=8.544) with a 95% CI of 7.68 to 9.69, whereas the median value was 6, in a range of <1 to 40 years of experience (Figure 4.5). Value of Skewness obtained for this variable was 1.580, and as shown in Figure 4.5, the curve is clustered towards lower scores. Most of the participants (75%) had up to 12 years of experience, further illustrating their young professional age, given that the maximum years of experience for this study was 40 years.

Figure 4.5

A histogram outlining distribution of respondents' years of experience

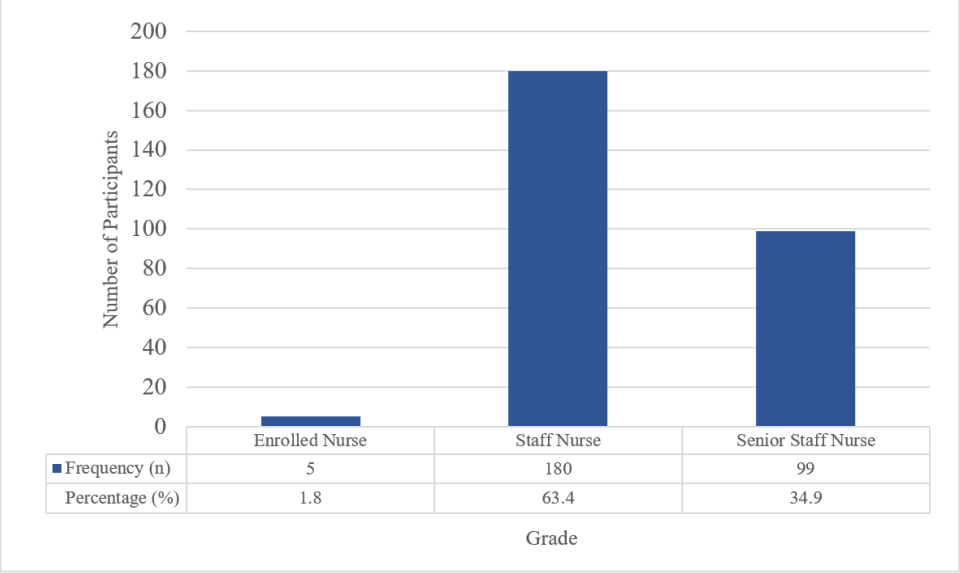


4.3.5 Nursing Grade

The majority of participants were staff nurses (SNs) (*n*=180, 63.4%), followed by senior staff nurses (SSNs) (*n*=99, 34.9%), and enrolled nurses (ENs) (*n*=5, 1.8%) (Figure 4.6).

Figure 4.6

Participant distribution of nursing grade

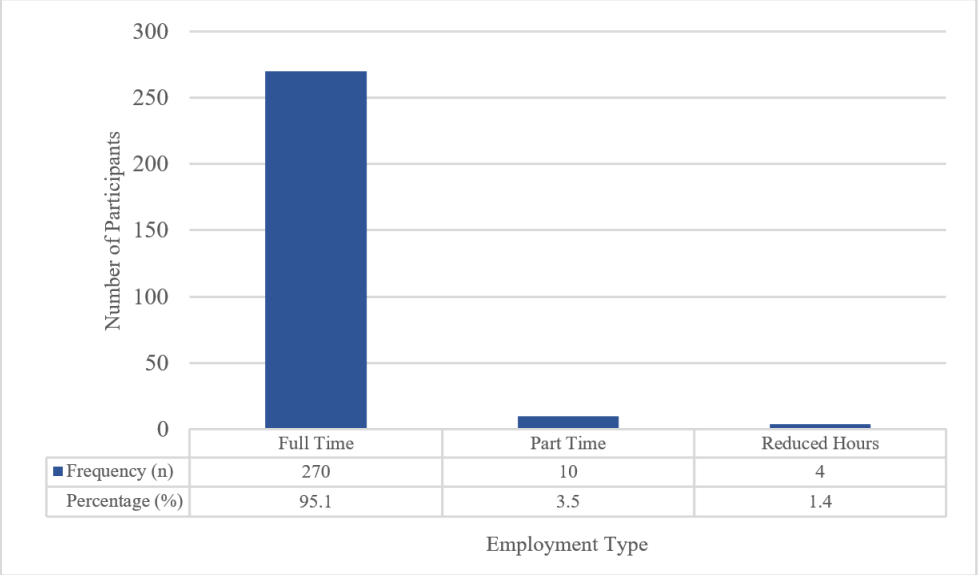


4.3.6 Employment type

The majority of participant nurses worked full-time (*n*=270, 95.1%), followed by those working reduced hours (*n*=10, 3.5%), with the least amount reporting working part-time (*n*=4, 1.4%) (Figure 4.7).

Figure 4.7

Participant distribution of employment type

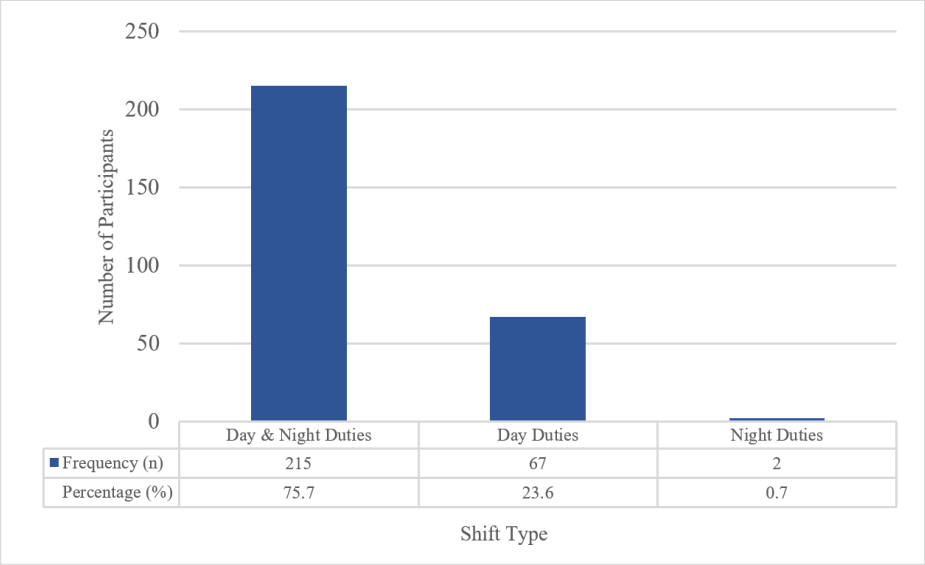


4.3.7 Shift type

The most common shift type reported was day and night duties (*n*=215, 75.7%), followed by day duties only (*n*=67, 23.6%) and night duties only (*n*=2, 0.7%) (Figure 4.8).

Figure 4.8

Participant distribution of shift type



4.3.8 Country of origin

The majority of participants were Maltese (*n*=244, 85.9%), with the remaining (*n*=40, 14.1%) being from: India (*n*=22, 7.7%), Philippines (*n*=7, 2.5%), Pakistan (*n*=3, 1.1%), Romania (*n*=3, 1.1%), Bulgaria (*n*=1, 0.4%), Italy (*n*=1, 0.4%), Latvia (*n*=1, 0.4%), Serbia (*n*=1, 0.4%) and Slovakia (*n*=1, 0.4%) (Figure 4.9).

Figure 4.9

Participant distribution of country of origin

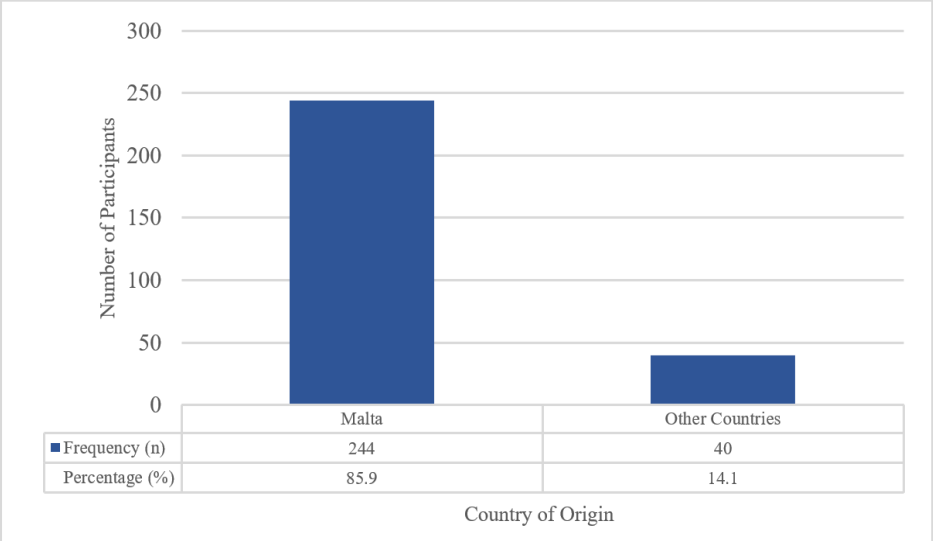


Table 4.3

Summary of participants' demographic characteristics

Demographic Data	*n* (%) or M ± SD
Gender	
Males	78 (27.5%)
Females	204 (71.8%)
Prefer not to disclose	2 (0.7%)
Age	30.84 ± 8.867
Highest academic level	
Undergraduate diploma	54 (19%)
Undergraduate degree	175 (61.6%)
Masters degree	55 (19.4%)
Doctorate	0
Years of experience	8.71 ± 8.564
Grade	
EN	5 (1.8%)
SN	180 (63.4%)
SSN	99 (34.9%)
Employment type	
Full-time	270 (95.1%)
Part-time	4 (1.4%)
Reduced hours	10 (3.5%)
Shift type	
Days and nights	215 (75.7%)
Days only	67 (23.6%)
Nights only	2 (0.7%)
Country of origin	
Malta	244 (85.9%)
Other countries	40 (14.1%)

4.4 Prevalence of WPV

Section A of the questionnaire addressed the prevalence of verbal and physical WPV in adult hospital wards. The majority of nurse participants (*n*=252, 89%) indicated that they have experienced either one or both forms of WPV in an adult-ward based setting. There were 32 (11%) nurse participants who indicated that they had never experienced neither physical nor verbal WPV. Figure 4.10 and Figure 4.11 display the distribution of frequencies for verbal and physical WPV, respectively.

Figure 4.10

Responses for the question: 'How often do you experience verbal altercations (e.g. threats, abuse, exaggerated arguments, offensive comments, etc.) at your workplace?

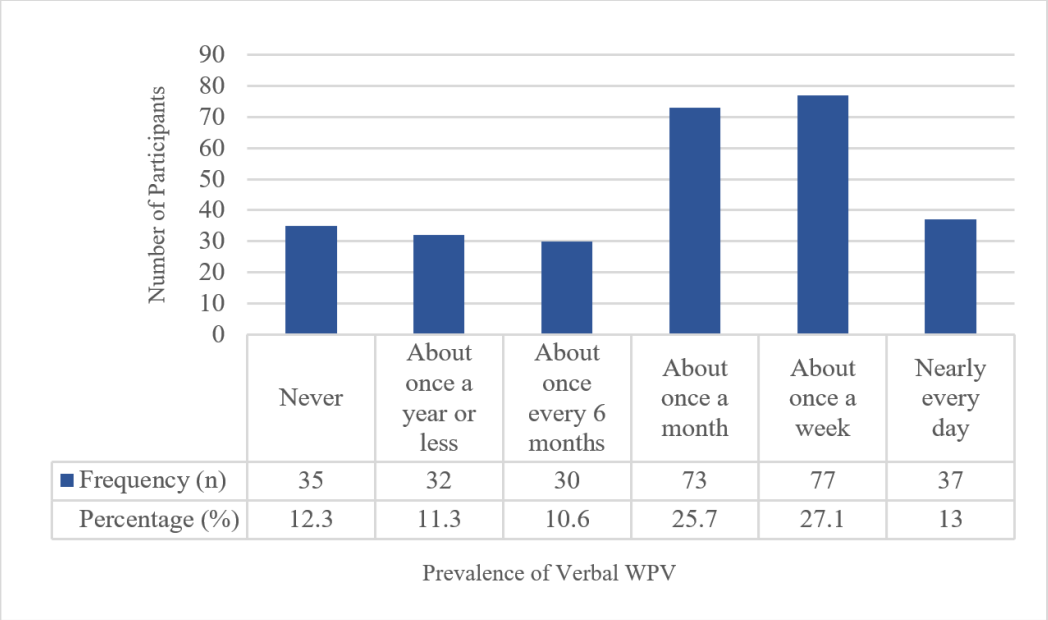
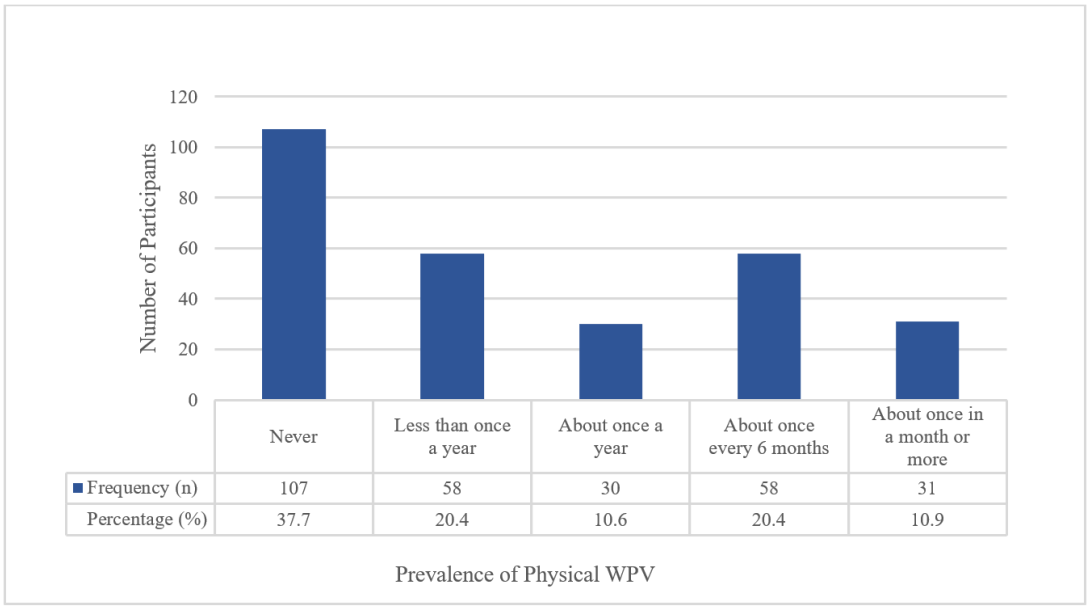


Figure 4.11

Responses for the question: 'How often do you experience physical violence (e.g., slapping, beating, thrashing,vandalizing, attack with weapons etc.) at your workplace?'



Out of the 252 participants who reported experiencing WPV, 249 (98.8%) nurses reported experiencing verbal WPV while 177 (70%) experienced physical WPV. The most frequent response for verbal WPV was 'about once a week' (n=77), whereas that of physical WPV was 'never' (n=107).

A difference in prevalence between the two forms of WPV can be observed when comparing the occurrence of both forms of WPV encountered in one month. The total number of respondents who experienced verbal WPV 'about once a month' (n=73), 'about once a week' (n=77), and 'nearly every day' (n=37) amounted to that of 187 (74%). This means that at least 187 participants have encountered verbal WPV in one month. Comparing this value with the number of respondents who experienced physical WPV 'about once in a month or more'

(n=31, 12%) illustrates the major discrepancy between both forms encountered by adult-ward nurses.

4.5 Risk factors to WPV

This section illustrates risk factors which respondents believe contribute to verbal and physical WPV. The first part of this section shall identify correlations between demographic characteristics and occurrence of WPV. To compare demographic variables with prevalence of WPV, x^2 tests were utilised. The second part of this section illustrates perpetrator characteristics, as well as environmental and situational factors which are perceived by nurses as contributing to the occurrence of WPV. For this part, the distributions of frequencies are displayed to identify the level of importance these factors play, as perceived by nurses in contributing to WPV.

4.5.1 The role of demographic characteristics in the prevalence of WPV

Correlations between occurrence of verbal and physical WPV with gender, age, highest academic qualification, years of experience, nursing grade, employment and shift type, and country of origin were identified using x^2 tests. As mentioned earlier, continuous values for ‘age and ‘years of experience’ were grouped into ranges to establish categorical variables (Table 4.4) (Appendix G for coding instructions).

Table 4.4

Ranges formulated for 'age' and 'years of experience'

[1] Ranges for 'age'	[2] Ranges for 'years of experience'
20-29 years	5 years or less
30-39 years	6-10 years
40-49 years	11-15 years
50-59 years	16-20 years
	21 years or more

[1] minimum age-20 years; maximum age- 58 years

[2] minimum years of experience <1 year; maximum years of experience: 40 years

Crosstabulations were generated for all demographic variables, revealing distribution of frequencies and percentages, indicating their correlation with prevalence of verbal and physical WPV encountered by nurses. Moreover, x^2 values and *p*-values for each variable were provided, and the latter was utilised to identify statistical significance. Table 4.5 demonstrates frequencies and percentages of nurses who indicated encountering physical and verbal WPV along with x^2 and *p*-values. Frequencies and percentages for Table 4.5 were generated by adding frequencies of WPV experienced 'about once a year or less', 'about once every six months', 'about once a month', 'about once a week' and 'nearly daily' for verbal WPV (n=249), and adding frequencies of 'less than once a year', 'about once every six months', and 'about once in a month or more' for physical WPV (n=177).

For the purpose of x^2 computation, the following variables were removed:

- The 'gender' variable 'prefer not to disclose'
- The 'employment type' variable 'part-time'
- The 'shift type' variable 'nights only'

These variables were selected by two, four, and two respondents respectively. Since a minimum of five respondents per variable is required for this computation, these variables were removed. Therefore, x^2 computations were conducted as follows:

- For ‘gender’, computations were only conducted on ‘male’ and ‘female’
- For ‘employment type’, computations were only conducted on ‘full-time’ and ‘reduced hours’
- For ‘shift type, computations were only conducted for ‘days and nights’ and ‘days only’.

Table 4.5

Characteristics and frequency distribution (in 'n' and '%') for verbal and physical WPV

	N	Verbal WPV (*n*=249)				Physical WPV (*n*=177)			
		n	**%**	x^2	***p* value**	***n***	**%**	x^2	***p* value**
Gender									
Males	78	66	85	7.1	0.213	45	58	2.956	0.565
Females	204	181	89			130	64		
Age									
20-29 years	161	159	98	99.668	<0.001	105	65	4.187	0.242
30-39 years	83	72	87			52	63		
40-49 years	25	15	60			14	56		
50-59 years	15	3	20			6	40		
Highest academic level									
Undergraduate diploma	54	46	85	12.2	0.272	30	55	13.045	0.058
Undergraduate degree	175	156	89			106	61		
Masters degree	55	47	85			41	75		
Years of experience									
5 ≥ years	130	129	99	37.913	<0.001	92	71	27.674	0.006
6-10 years	80	68	85			50	62		
11-15 years	23	17	74			13	56		
16-20 years	27	19	70			13	48		
21 + years	24	16	60			9	38		
Grade									
EN	5	3	60	12.602	0.247	2	40	11.975	0.152
SN	180	157	87			111	62		
SSN	99	89	90			64	65		
Employment type									
Full-time	270	237	88	5.097	0.165	170	63	1.578	0.664
Reduced hours	10	8	80			5	50		
Shift type									
Days and nights	215	194	90	6.605	0.252	143	67	14.906	0.005
Days only	67	54	81			34	51		
Country of origin									
Malta	244	214	88	5.364	0.373	154	63	4.721	0.317
Other Countries	40	35	87			23	58		

N= number of total reported incidents

Findings illustrate that a higher risk of verbal WPV was related to younger age and years of experience (p=<0.001) (Table 4.5). Nurses aged 29 years and under reported higher encounters of verbal WPV (n=159, 98%) when compared to those aged 30 years and over. Those having five years of experience or less (n=129, 99%) had more encounters of verbal WPV than more experienced nurses. For both groups, the incidence of verbal WPV decreased with age and experience. Strong associations between occurrence of verbal WPV, and age and years of experience were indicated by x^2 values for both groups which were higher when compared to the remaining variables (x^2=99.668 and 37.913 respectively). No statistical significance in risk profiles for verbal WPV was illustrated for gender (p=0.213), academic level (p=0.272), nursing grade (p=0.247), employment type (p=0.165), shift type (p=0.252) and country of origin (p=0373).

Higher risks of physical WPV were related to lower years of experience (p=0.006) and shift type (p=0.005) (Table 4.5). Results indicated that nurses having five years of experience or less (71%) were more likely to encounter physical WPV, and similarly to verbal WPV, its occurrence decreased with experience. Additionally, those working mixed shift types (67%) illustrated a higher risk of physical WPV than those working days only (50%). Moreover, x^2 values for years of experience and shift type were higher (x^2=27.764 and 14.906, respectively) than for the remaining variables, indicating a strong correlation between the two variables and physical WPV. No statistical significance for increased risk of physical WPV was shown for gender (p=0.565), age (p=0.242), academic level (p=0.058), nursing grade (p=0.152), employment type (p=0.664) and country of origin (p=0.317).

4.5.2 Risk factors perceived as contributing to WPV

Section E of the questionnaire addressed risk factors which are perceived by nurses as contributing to verbal and physical WPV. Figure 4.12 and Table 4.6 indicate the distribution of frequencies for these risk factors.

Figure 4.12

Distribution of frequencies for perceived risk factors to WPV

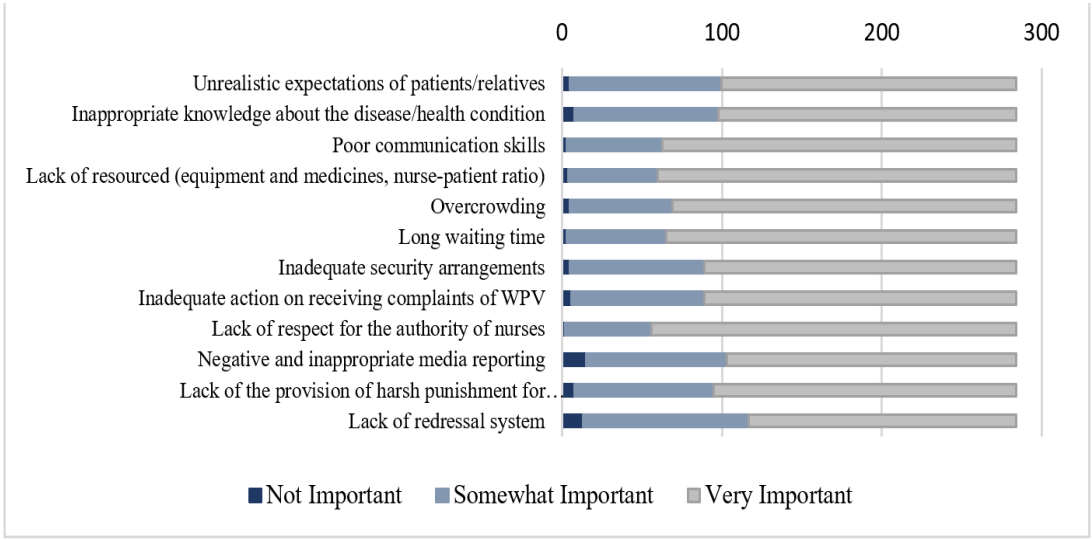


Table 4.6

Distribution of frequencies (in 'n' and '%') for perceived risk factors to WPV

	Not Important		Somewhat Important		Very Important	
	n	**%**	***n***	**%**	***n***	**%**
Unrealistic expectations of patients/relatives	5	1.8	95	33.5	184	64.8
Inappropriate knowledge about the disease/health condition	8	2.8	90	31.7	186	65.5
Poor communication skills	3	1.1	60	21.1	221	77.8
Lack of resources	4	1.4	56	19.7	224	78.9
Overcrowding	5	1.8	64	22.5	215	75.7
Long waiting time	3	1.1	62	21.8	219	77.1
Inadequate security arrangements	5	1.8	84	29.6	195	68.7
Inadequate action on receiving complaints of WPV	6	2.1	83	29.2	195	68.7
Lack of respect for the authority of nurses	2	0.7	54	19	228	80.3
Negative and inappropriate media reporting	15	5.3	88	31	181	63.7
Lack of the provision of harsh punishment for perpetrators	8	2.8	87	30.6	189	66.5
Lack of redressal system	13	4.6	104	36.6	167	58.8

More than 50% of participants rated each risk factor as a 'very important' contributing factor to WPV. The highest scored perceived risk factor amongst nurses was 'lack of respect for the authority of nurses' (n=228, 80.3%), whereas, the least important perceived risk factor, although still selected by more than 50% of participants, was 'lack of redressal system' (n=167, 58.8%).

Since all respondents were asked to complete this section (including those who never encountered physical and verbal WPV), the present researcher wanted to compare findings between those who never experienced WPV with those who experienced WPV. However, the small number of participants who have never experienced WPV (n=32) was found to be insufficient for analysis when compared to those who experienced WPV (n=252). Therefore, this step could not be carried out.

4.6 Response and reporting patterns

This section addresses nurses' responses to verbal and physical WPV. The first part of this section illustrates and compares frequencies of responses to WPV as reported by nurses. The second part of this section highlights awareness of nurses to local protocols, and compare these findings with their utilisation to report WPV. The third part illustrates the findings for comfort in reporting and reasons of underreporting. Two non-parametric tests, namely the Wilcoxon Signed Rank Test and x^2 tests, were carried out to identify how these factors affect nurses' reporting behaviours.

4.6.1 Responses to WPV

In Question B6 of the tool, participants were asked to select one or more options which represented their response when encountering ward-based WPV. Figure 4.13 and Table 4.7 display the distribution of responses selected by participants.

Figure 4.13

Distribution of frequencies for adult-ward nurses' reported responses to WPV

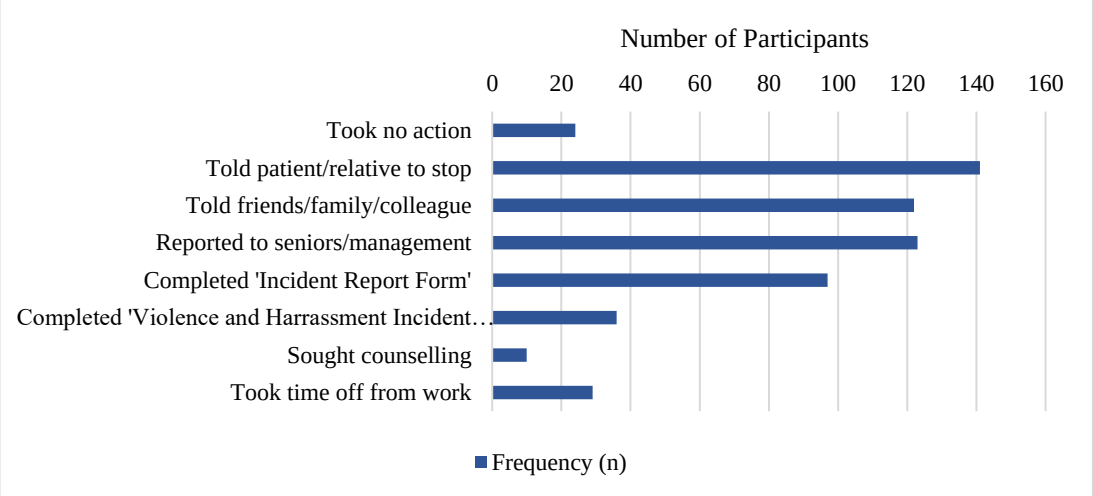


Table 4.7

Distribution of frequencies (in 'n' and '%') for adult-ward nurses reported responses to WPV

	Frequency (*n*)	Percentage (%)
Took no action	30	11.9
Told patient/relative to stop	130	51.3
Told friends/family/colleague	122	48.2
Reported to seniors/management	72	28.5
Completed 'Incident Report Form'	97	38.3
Completed 'Violence and Harassment Incident Report Form'	36	14.2
Sought counselling	15	5.9
Took time off from work	29	11.5

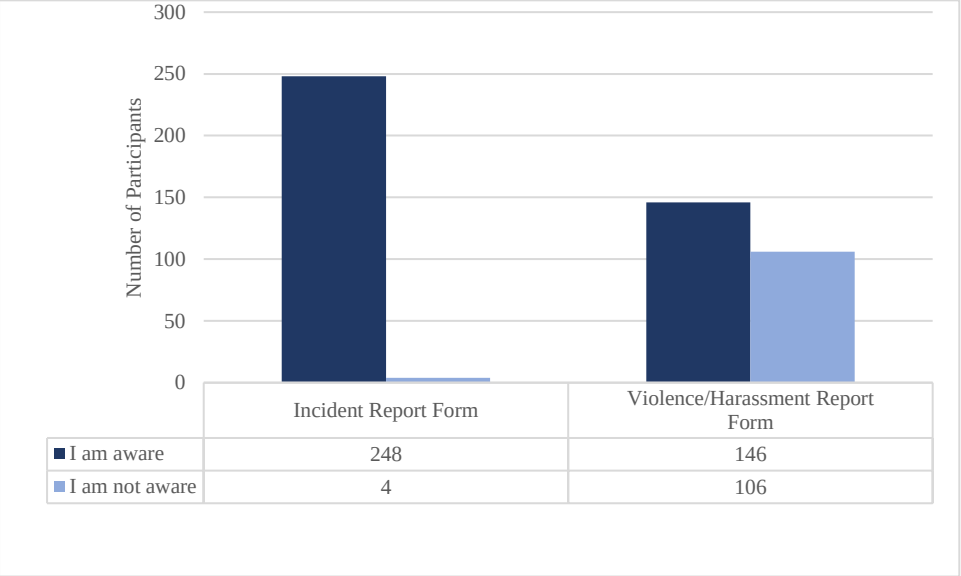
Figure 4.13 and Table 4.7 show that participants responded to WPV in various ways. The most frequent response was telling 'patients/relatives to stop' (*n*=130, 51.3%). This indicates that at least half of this study's participants responded to WPV at the time of encounter through communication with perpetrator. Only 11.9% (*n*=30) took no action. The least selected responses were 'took time off from work' (*n*=29, 11.5%) and 'sought counselling' (*n*=15, 5.9%).

4.6.2 Nurses' awareness and uses of local protocols

Part B of the questionnaire addressed nurses' awareness of local protocols used to report WPV in the local acute hospital. Nurses had to select from 'I am aware' and 'I am not aware' for the two local protocols; namely the 'Incident Report Form' and the 'Violence/Harassment Incident Report Form'. Figure 4.14 displays the distribution of awareness amongst respondents.

Figure 4.14

Awareness of the availability of local protocols to report WPV amongst adult-ward nurses



Almost all of the respondent nurses were aware of the availability of the 'Incident Report Form' and its use to report WPV (n=248, 98.4%), whereas the percentage of those aware of the 'Violence/Harassment Incident Report Form' was only slightly higher than half the number of respondents (n=146, 57.9%).

After determining awareness, crosstabulations were generated to determine the relationship between awareness of the 'Incident Report Form' and 'Violent/Harassment Incident Report Form', and their utility amongst those who have encountered WPV (Table 4.8 and Table 4.9 respectively).

Table 4.8

Crosstabulation indicating the correlation between awareness and the utilisation of the 'Incident Report Form'

			Completed 'Incident report Form'		
			No	Yes	Total
Awareness of 'Incident Report Form'	**I am aware**	Count	151	97	248
		%	60.9%	39.1%	100.0%
	I am not aware	Count	4	0	4
		%	100.0%	0.0%	100.0%
Total		Count	155	97	252
		%	61.5%	38.5%	100.0%

Table 4.9

Crosstabulation indicating the correlation between awareness and the utilisation of the 'Violence/Harassment Incident Report Form'

			Completed 'Violence and Harassment Incident Report Form'		
			No	Yes	Total
Awareness of 'Violence/Harassment Incident Report Form'	**I am aware**	Count	110	36	146
		%	75.3%	24.7%	100.0%
	I am not aware	Count	106	0	106
		%	100.0%	0.0%	100.0%
Total		Count	216	36	252
		%	85.7%	14.3%	100.0%

Tables 4.8 and 4.9 indicate that more than half of the respondents who were aware of the local protocols available to report WPV did not utilise these forms to report encounters of WPV (n=151, 60.9% and n=110, 75.3% for the 'Incident Report Form' and 'Violence and Harassment Incident Report form, respectively).

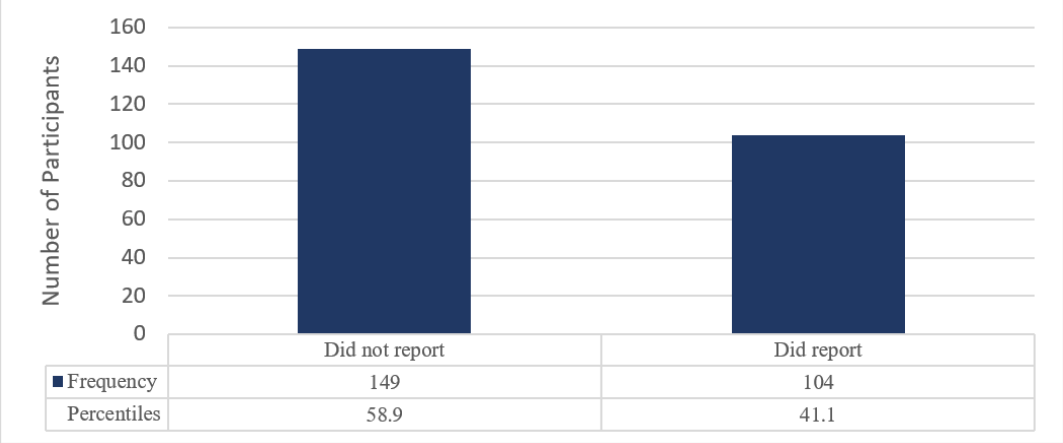
4.6.3 Nurses' attitudes towards reporting WPV

To analyse nurses' comfort in reporting and reasons for underreporting, the researcher grouped participants as 'did report' or 'did not report' WPV. With reference to Question B6 in Part C of the questionnaire, those who selected

'proceeded to reporting to seniors/management', 'completed the 'Incident Report Form'', and/or 'Completed the 'Violence/Harassment Incident Form', were categorised under 'did report'. Those who did not select any of these options and selected any other option in this question, were categorised as 'did not report'. Numerical codes were then given to both categories (1=did not report, 2=did report) (Appendix G), and data was inputted for analysis. Percentiles of frequencies generated for these two categories were 58.9% (*n*=149) for 'did not report' and 41.1% (*n*=104) for 'did report' (Figure 4.15). This indicates that more than half of nurses experiencing WPV did not report the event to managers or authorities, nor through the use of incident report forms.

Figure 4.15

Frequency distribution of tendencies to report WPV amongst adult-ward nurses



Question C1 of the questionnaire addressed nurses' comfort in reporting episodes of WPV to competent authorities. Nurses were asked to select options from a 5-point Likert scale, with each point being assigned a value ('Strongly Disagree=1' to 'Strongly Agree=5') (Appendix G). A mean score for perceived level of comfort was generated, where the higher the score, the higher the perceived level of comfort

in reporting. Descriptive statistics (Table 4.10) illustrated a mean value of 2.55 (SD=1.307), a median value of 2 and a mode of 1. Given that the minimum and maximum possible scores attained for perceived level of comfort were 1 and 5 respectively, the mean score illustrates low levels of comfort in reporting WPV. A Skewness value of 0.396 was also generated. Since values for Skewness larger than '0' indicate that the distribution of values is clustered towards lower scores (Pallant, 2016), this further demonstrates nurses' tendencies to be uncomfortable reporting encounters of WPV.

Table 4.10

Descriptive statistics generated from statement 'I would be comfortable reporting the episode/episodes of WPV to competent authorities'

Mean	2.55
Median	2.00
Mode	1
Std. Deviation	1.307
Skewness	.396
Std. Error of Skewness	.153
Minimum	1
Maximum	5

The Wilcoxon Signed Rank Test was then carried out to determine how nurses' level of comfort impacted the act of reporting WPV. Findings illustrated a significant difference between the two groups (p=<0.001) (Table 4.11). This implies that comfort in reporting did in fact determine the occurrence of reporting amongst nurses. Table 4.12 further illustrates this relationship emanating from the crosstabulation generated between the two variables. Incidence of reporting was more frequent amongst those choosing the categories 'Agree' and 'Strongly agree'

(93% and 100% respectively), than in those who chose the 'Disagree' and 'Strongly disagree' categories (13.4% and 10.1% respectively).

Table 4.11

Test statistics generated from the Wilcoxon Signed Rank Test for comfort in reporting WPV and occurrence of reporting

	I would be comfortable reporting WPV to competent authorities - Reported Vs. Not Reported
Asymp. Sig. (2-tailed)	<.001

Table 4.12

Crosstabulation comparing comfort in reporting WPV and occurrence of reporting

			Reported vs Not reported		
			Not reported	Reported	Total
I would be comfortable reporting WPV to competent authorities	Strongly disagree	Count	62	7	69
		%	89.9%	10.1%	100.0%
	Disagree	Count	58	9	67
		%	86.6%	13.4%	100.0%
	Neutral	Count	26	24	50
		%	52.0%	48.0%	100.0%
	Agree	Count	3	40	43
		%	7.0%	93.0%	100.0%
	Strongly agree	Count	0	24	24
		%	0.0%	100.0%	100.0%
Total		Count	149	104	252
		%	58.9%	41.1%	100.0%

Questions C2 to C9 assessed factors which contributed to underreporting of WPV amongst adult-ward nurses. Figure 4.16 and Table 4.13 display the distribution of frequencies of these contributing factors.

Figure 4.16

Frequency distribution of factors perceived as contributing to underreporting of WPV

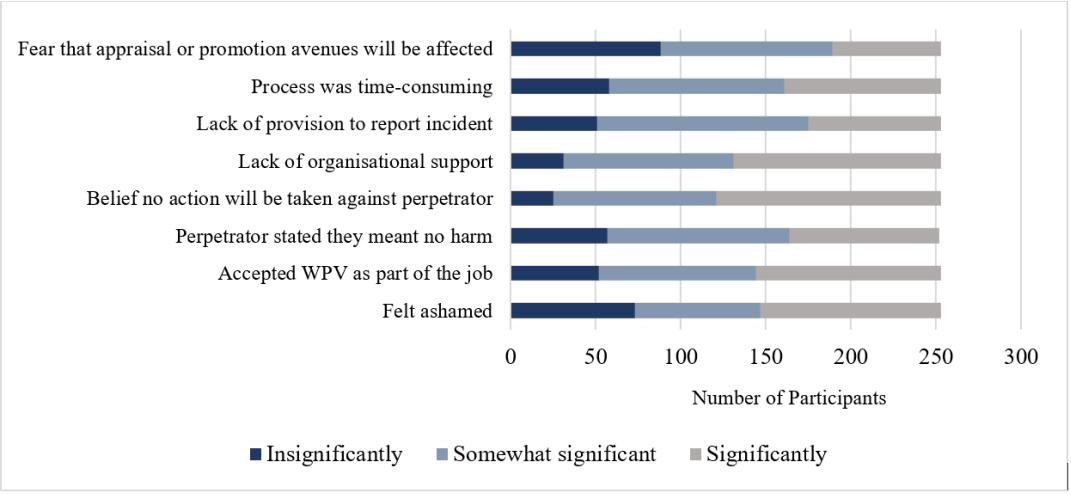


Table 4.13

Frequency distribution of factors perceived as contributing to underreporting of WPV (in 'n' and '%')

	Insignificantly		Somewhat significant		Significantly	
	n	%	*n*	%	*n*	%
Felt ashamed	73	28.9	74	29.2	106	41.9
Accepted WPV as part of the job	52	20.6	92	36.4	109	43.1
Perpetrator stated they meant no harm	57	22.5	89	35.3	107	42.3
Belief no action will be taken against perpetrator	25	9.9	96	37.9	132	52.2
Lack of organisational support	31	12.3	100	39.5	122	48.2
Lack of provision to report incident	51	20.2	124	49	78	30.8
Process was time-consuming	58	22.9	103	40.7	92	36.4
Fear that appraisal or promotion avenues will be affected	88	34.8	101	39.9	64	25.3

The factors listed above were perceived as significant amongst nurses in contributing to underreporting. The most frequent responses for these factors were 'significantly' and 'somewhat significant'. Factors which were perceived as most significant included 'belief no action will be taken against perpetrator' (*n*=132, 52.2%), 'lack of organisational support' (*n*=122, 48.2%), 'accepted WPV as part of the job' (*n*=109, 43.1%), 'perpetrator stated they meant no harm' (*n*=107, 42.3%)

and ‘felt ashamed’ (*n*=106, 41.9%). Factors which scored the highest as ‘somewhat significant’ were ‘lack of provision to report incident’ (*n*=124, 49%), ‘process was time consuming’ (*n*=103, 40.7%) and ‘fear that appraisal or promotion avenues will be affected’ (*n*=101, 39.9%).

To identify whether these factors actually contributed to underreporting of WPV amongst respondents, x^2 analysis was carried out. Crosstabulations were generated, revealing correlations between perceived contributing factors for underreporting and participants who did not report WPV. Both x^2 and *p*-values for each variable were provided, and the latter was utilised to identify statistical significance. Table 4.14 summarises findings generated from this analysis.

Table 4.14

Findings from x^2 analysis which compared factors perceived as contributing to underreporting to the actual occurrence of underreporting

	Participants who did not report WPV (*n*=149)			
	n	**%**	**x^2**	***p* value**
Felt ashamed of reporting				
Insignificantly	25	34.2		
Somewhat Significant	37	50	44.266	<0.001
Significantly	87	82.1		
Accepted aggressive encounters as part of the job				
Insignificantly	16	30.8		
Somewhat Significant	46	50	39.706	<0.001
Significantly	87	79.8		
Perpetrator stated they meant no harm				
Insignificantly	18	31.6		
Somewhat Significant	65	61.7	25.261	<0.001
Significantly	66	73		
Belief no action will be taken against perpetrator				
Insignificantly	15	60		
Somewhat Significant	51	53.1	2.198	0.333
Significantly	83	62.9		
Lack of organisational support				
Insignificantly	17	54.8		
Somewhat Significant	59	59	0.256	0.880
Significantly	73	59.8		
Lack of provision to report incident				
Insignificantly	27	52.9		
Somewhat Significant	68	54.8	5.031	0.081
Significantly	54	69.2		
Process was time-consuming				
Insignificantly	29	50		
Somewhat Significant	62	60.2	2.621	0.270
Significantly	58	63		
Fear that appraisal or promotion avenues will be affected				
Insignificantly	46	52.3		
Somewhat Significant	64	63.4	2.538	0.281
Significantly	39	60.9		

Findings from x^2 analysis indicated that although all factors were perceived as contributing to underreporting of WPV (as discussed earlier in this section), 'felt

ashamed of reporting' (n=87, 82.1%), 'accepted aggressive encounters as part of the job' (n=87, 79.8%) and 'perpetrator stated they meant no harm' (n=66, 73%) were the only factors which significantly correlated with not reporting WPV (p=<0.001). The x^2 values for the three variables were higher than the remaining groups (x^2=44.266, 39.706, and 25.261, respectively) indicating their strong correlation with underreporting. The remaining factors were found not to be statistically significant in determining the occurrence of underreporting.

4.7 Reported impact on nurses' well-being

This section addresses reported well-being amongst nurses who encountered WPV, in terms of personal and psychological well-being, familial and societal relationships, and feelings towards the workplace. Participants were asked to rank the former four items as 'not/mildly affected', 'moderately affected', and 'severely affected'. For feelings towards the workplace, participants were asked to choose one or more options from a list which represented various ways in which feelings towards workplace might have been affected by WPV.

4.7.1 Personal well-being

Question B2 of the questionnaire addressed the impact physical and verbal WPV have on personal well-being in terms of four subitems; 'sleep schedule', 'eating pattern', 'fitness' and 'grooming'. Figure 4.17 and Table 4.15 display the distribution of frequencies of these findings as described by respondents.

Figure 4.17

Responses for the question: 'How much have the episodes of violence at your workplace affected your personal well-being and self-care in the following aspects?'

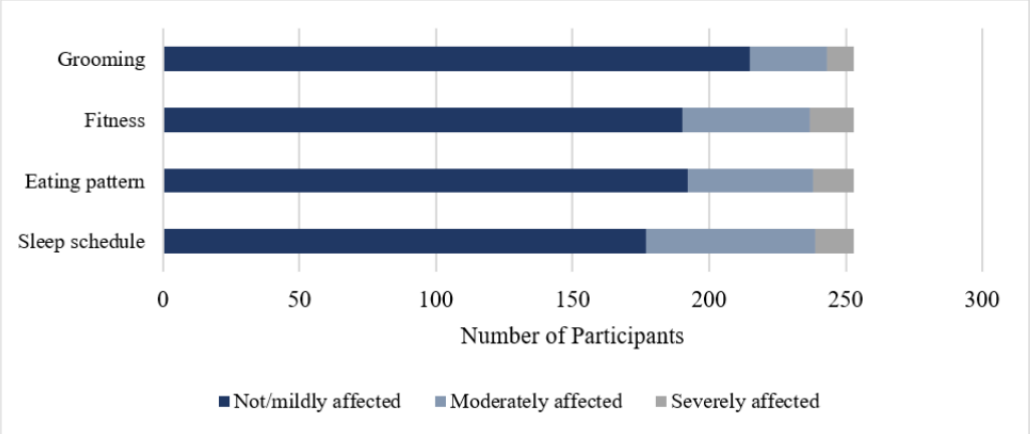


Table 4.15

Responses for the question: 'How much have the episodes of violence at your workplace affected your personal well-being and self-care in the following aspects?'

	Not/mildly affected		Moderately affected		Severely affected	
	n	**%**	***n***	**%**	***n***	**%**
Sleep schedule	177	70	62	24.5	14	5.5
Eating pattern	192	75.9	46	18.2	15	5.9
Fitness	190	75.1	47	18.6	16	6.3
Grooming	215	85	28	11.1	10	4

The findings displayed above illustrate that the majority of participants' personal well-being, ranging from 70 to 85%, were mildly or not affected, with 4 to 6.3% of participants reporting WPV as severely affecting their personal well-being. Less than a quarter of participants (11.1% to 24.5%) reported their personal well-being as being moderately affected.

4.7.2 Psychological well-being

Question B5 of the questionnaire addressed how respondents reported the impact that verbal and physical WPV have on psychological well-being, represented

in eight subitems; ‘increased aggressiveness’, ‘increased irritability’, ‘low self-esteem’, ‘anxiety’, ‘fear’, ‘stress’, ‘lack of confidence’ and ‘burnout’. Figure 4.18 and Table 4.16 illustrate the distribution of findings for this section.

Figure 4.18

Responses for the question: ‘How much have the episodes of violence at your workplace affected your mental and psychological well-being and self-care in the following aspects?’

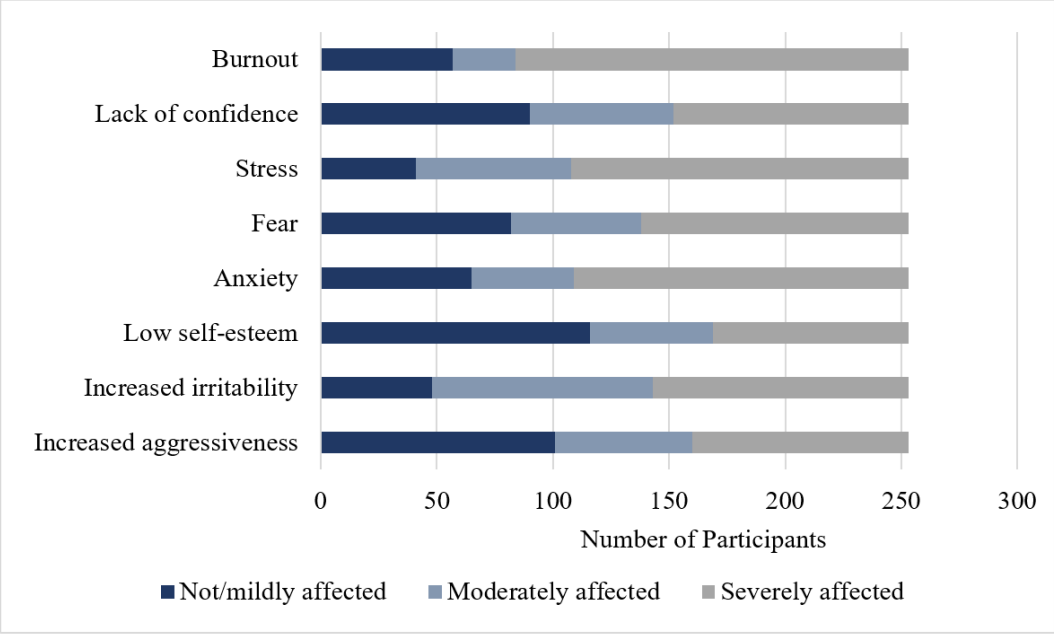


Table 4.16

Responses for the question: ‘How much have the episodes of violence at your workplace affected your mental and psychological well-being and self-care in the following aspects?’

	Not/mildly affected		Moderately affected		Severely affected	
	n	**%**	***n***	**%**	***n***	**%**
Increased aggressiveness	101	39.9	59	23.3	93	36.8
Increased irritability	48	19	95	37.5	110	43.5
Low self-esteem	116	45.8	53	20.9	84	33.2
Anxiety	65	25.7	44	17.4	144	56.9
Fear	82	32.4	56	22.1	115	45.5
Stress	41	16.2	67	26.5	145	57.3
Lack of confidence	90	35.6	62	24.5	101	39.9
Burnout	57	22.5	27	10.7	169	66.8

The findings illustrate that for six out of the eight subitems, the highest ranked response (39.9% to 66.8%) was ‘severely affected’, with ‘burnout’ being the most ‘severely affected’ (n=169, 66.8%). The two factors which were the least affected were ‘increased aggressiveness’ and ‘low self-esteem’, where the highest ranked responses for these subitems were ‘not/mildly affected’ (39.9% and 45.8% respectively).

Further analysis using x^2 tests was conducted to determine statistical correlations between encounters of verbal and physical WPV and the six factors of psychological well-being which were reported as being ‘severely affected’ by the occurrence of WPV. Table 4.17 summarises this analysis.

Table 4.17

Findings from x^2 analysis which determined which form(s) of WPV severely affected psychological well-being

	Verbal WPV (*n*=249)				Physical WPV (*n*=177)			
	n	**%**	x^2	***p*-value**	***n***	**%**	x^2	***p*-value**
Increased irritability								
Not/mildly affected	48	19	32.290	<0.001	28	15.8	7.252	0.298
Moderately affected	94	38			67	38		
Severely affected	107	43			82	46.2		
Anxiety								
Not/mildly affected	65	26.1	30.966	<0.001	41	23.2	4.715	0.581
Moderately affected	44	17.7			29	16.4		
Severely affected	140	56.2			107	60.4		
Fear								
Not/mildly affected	81	32.5	26.041	<0.001	55	31	5.331	0.502
Moderately affected	56	22.5			37	21		
Severely affected	112	45			85	48		
Stress								
Not/mildly affected	41	16.5	27.021	<0.001	24	13	9.375	0.154
Moderately affected	66	26.5			44	25		
Severely affected	142	57			109	62		
Lack of confidence								
Not/mildly affected	90	36	25.260	<0.001	60	34	6.609	0.358
Moderately affected	62	25			45	25.4		
Severely affected	97	39			72	40.6		
Burnout								
Not/mildly affected	57	23	47.220	<0.001	33	18.6	11.484	0.075
Moderately affected	27	10.8			17	9.6		
Severely affected	165	66.2			127	71.8		

These findings illustrate a significant correlation between occurrence of verbal WPV and a severe impact on psychological well-being in terms of the six subitems reported as ‘severely affected’ by nurses (p=<0.001). However, this severe impact was not associated with the occurrence of physical WPV (p=>0.005 for all six subitems). In fact, x^2 values for the subitems under verbal WPV were higher than those under physical WPV, indicating stronger correlations between verbal WPV and severely affected psychological well-being.

4.7.3 Familial and societal relationships

Questions B3 and B4 of the questionnaire addressed the impacts of WPV on nurses' familial and societal relationships accordingly. Figures 4.19 and 4.20 illustrate the distribution of frequencies for impacts on familial and societal relationships, respectively.

Figure 4.19

Responses for the question: 'How much has your family been affected due to the episodes of violence at your workplace?'

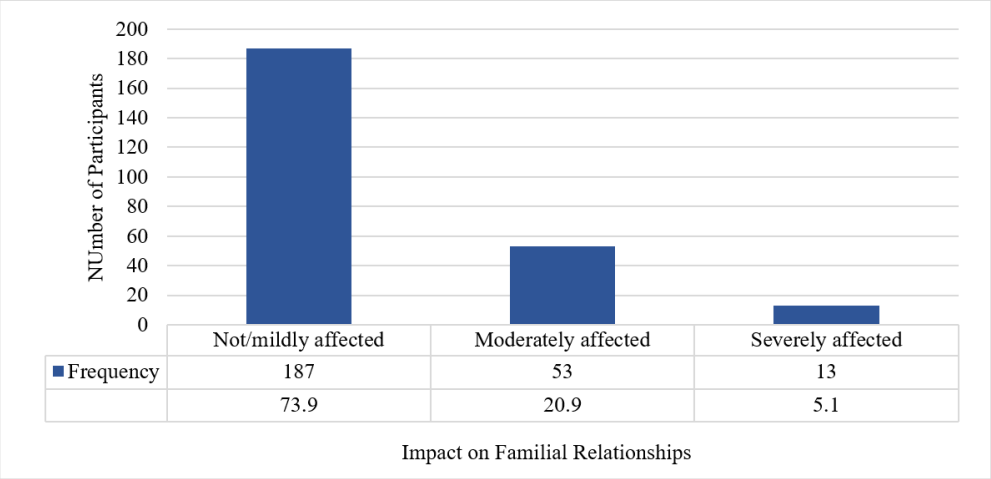
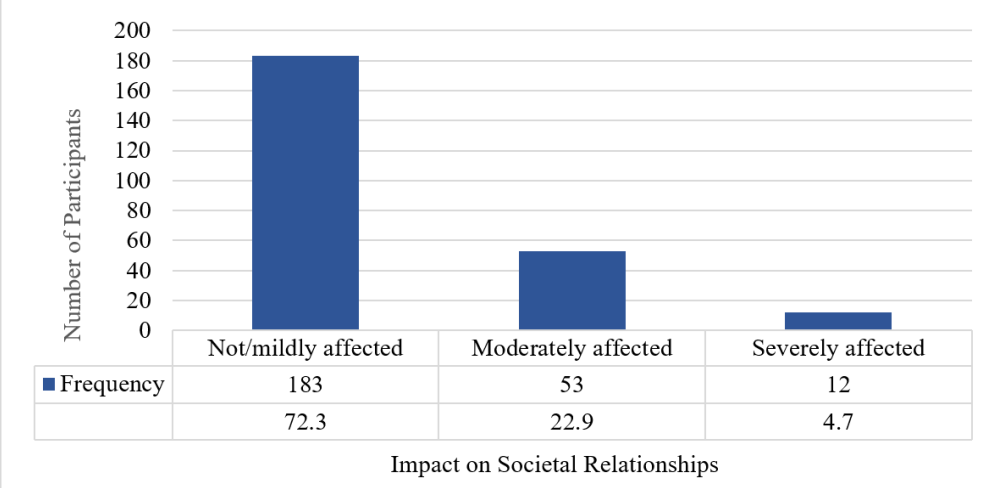


Figure 4.20

Responses for the question: 'How much has your social life been affected due to the episodes of violence at your workplace?'



For both items, more than half of respondents reported that familial and societal relationships were ‘not/mildly affected’ by WPV (73.9% and 72.3% respectively). There were 5.1% of respondents who reported severe effects on familial relationships, whereas 4.7% reported severe impacts on familial relationships. Less than a quarter of respondents reported familial and societal relationships being moderately affected by WPV (20.9% and 22.9% respectively).

4.7.4 Feelings towards the workplace

Question B1 of the questionnaire addressed feelings developed towards workplace after being exposed to WPV. Participants were asked to select one option or more accordingly. Figure 4.21 and Table 4.18 illustrate the distribution of options selected by participants.

Figure 4.21

Frequency distribution of the reported impact WPV has on adult-ward nurses’ feelings towards workplace

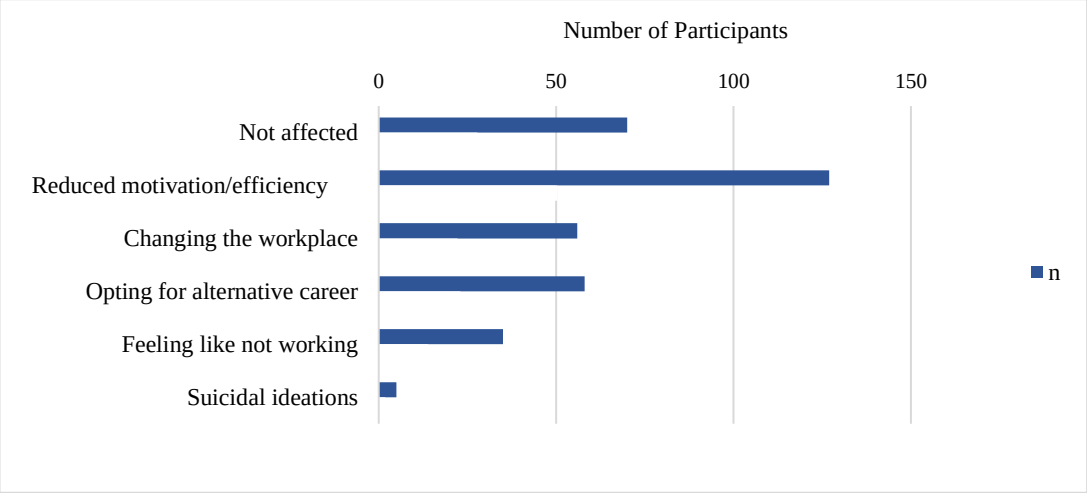


Table 4.18

Frequency distribution (in n and %) of the reported impact WPV has on adult-ward nurses' feelings towards workplace

	Frequency (*n*)	Percentage (%)
Not affected	70	27.7
Reduced motivation/efficiency	129	51
Changing the workplace	67	26.5
Opting for alternative career	104	41.1
Feeling like not working	70	27.7
Suicidal ideations	6	2.4

Findings above indicate that more than half of respondents felt that their feelings towards workplace have been affected in response to WPV (*n*=183, 72.3%), whereas the remaining participants (*n*=70, 27.7%) reported that their feelings have not been affected. The most commonly selected options were 'reduced motivation/efficiency' (*n*=129, 51%) and 'opting for alternative career' (*n*=104, 41.1%). The least commonly selected option was 'suicidal ideations' (*n*=6, 2.4%).

Analysis using x^2 tests was conducted to identify which forms of WPV contributed to feelings developed towards workplace. Table 4.19 summarises findings from this analysis.

Table 4.19

Findings from x^2 analysis which determined which form(s) of WPV contributed to feelings developed towards WPV

	Verbal WPV (*n*=249)				Physical WPV (*n*=177)			
	n	**%**	***x*²**	***p*-value**	***n***	**%**	***x*²**	***p*-value**
Reduced Motivation/efficiency	125	50.2	10.484	0.015	83	47	7.993	0.046
Changing the workplace	65	26.1	3.243	0.356	48	27.1	4.402	0.221
Opting for an alternative career	101	40.6	3.462	0.326	78	44.1	8.137	0.043
Feeling like not working	68	27.3	5.932	0.115	50	28.2	2.517	0.472
Suicidal Ideations	7	2.8	10.427	0.103	5	2.8	0.730	0.866

Findings displayed in Table 4.19 show that occurrence of verbal and physical WPV significantly correlated to 'reduced motivation/efficiency' (p=0.015 and p=0.046 respectively). The occurrence of physical WPV was also significantly associated with 'opting for an alternative career' (p=0.043) however this was not significantly associated with verbal WPV (p=0.326). The remaining options did not show statistical significance with either form of WPV (p=>0.05 for all options). The x^2 values for variables which were significantly correlated with WPV scored higher than other variables which were not statistically significant, indicating their stronger correlation with verbal and physical WPV respectively.

4.8 Mitigation strategies

Section D of the questionnaire addressed mitigation strategies which are perceived by nurses as lessening the prevalence of WPV. Results displayed below (Figure 4.22, Table 4.20) indicate the distribution of frequencies for these mitigation strategies.

Figure 4.22

Frequency distribution of mitigation strategies perceived as lessening WPV

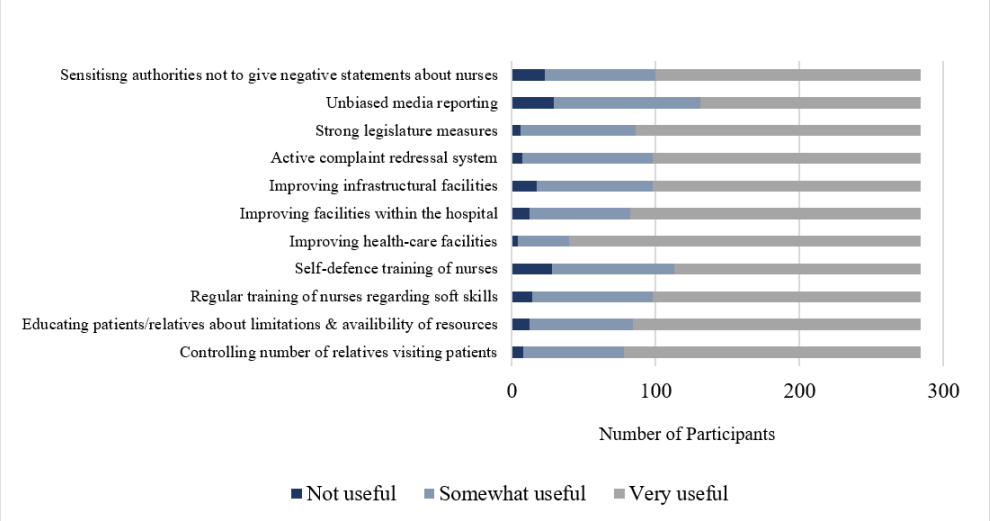


Table 4.20

Frequency distribution (in 'n' and '%') of mitigation strategies perceived as lessening WPV

	Not useful		Somewhat useful		Very useful	
	n	**%**	***n***	**%**	***n***	**%**
Controlling number of relatives visiting patients	8	2.8	70	24.6	206	72.5
Educating patients/relatives about limitations & availability of resources	12	4.2	72	25.4	200	70.4
Regular training of nurses regarding soft skills	14	4.9	84	34.5	186	65.5
Self-defence training of nurses	23	23	77	27.1	184	64.8
Improving health-care facilities	4	1.4	36	12.7	244	85.9
Improving facilities within the hospital	12	4.3	70	24.6	202	71.1
Improving infrastructural facilities	17	6	81	28.5	186	65.5
Active complaint redressal system	7	2.5	91	32	186	65.5
Strong legislative measures	6	2.1	80	28.2	198	69.7
Unbiased media reporting	29	10.2	102	35.9	153	53.9
Sensitising authorities not to give negative statements about nurses	28	9.9	85	29.9	171	60.2

These findings illustrate that all mitigation strategies listed in the questionnaire were perceived as being very useful in lessening the prevalence WPV. More than 50% of participants rated each item as 'very useful' in mitigating WPV. The highest scored perceived mitigation strategy amongst nurses was 'improving health-care facilities' (n=224, 85.9%), whereas, the least important perceived item, although still selected by more than 50% of participants, was 'unbiased media reporting' (n=153, 53.9%).

The present researcher wanted to identify whether perceived mitigation strategies from respondents who have encountered WPV differed from those who have never experienced WPV. However; as mentioned previously, the number of participants who have never experienced any form of WPV was relatively small (n=32), and was therefore insufficient for analysis and comparison. Hence, this step was not carried out.

4.9 The hypotheses

The previous chapter presented hypotheses formulated based on the present study's literature review along with theoretical frameworks which guided this dissertation. This section will determine whether the hypotheses formulated can be accepted or rejected based on the findings presented in this chapter. As suggested by Toledo et al. (2011), the *p*-value should be considered to determine whether the null hypothesis can be accepted or rejected. The null hypothesis is the assumption that no relationship exists between the variables under study (Toledo et al., 2011). A *p*-value less than or equal to 0.05 denotes the rejection of the null hypothesis and acceptance of the alternative hypothesis, and vice versa. The alternative hypotheses for the present study were those which were formulated in the previous chapter (Section 3.2). In cases where *p*-values were not produced in the present chapter, and findings were presented as frequencies, differences in percentages (if any) were considered to accept or reject each respective hypothesis. The present author recognises this as a limitation since the presence of the *p*-value to accept or reject a null hypothesis ensures accuracy upon which the decision is based (Toledo et al., 2011).

Table 4.21 summarises the hypotheses formulated for this study along with respective *p*-values or percentages upon which decisions to accept or reject hypotheses were made. For those hypotheses having findings which produced a *p*-value, a null hypothesis along with the alternative/formulated hypothesis is presented, whereas for those having findings which produced solely percentages, only the alternative/formulated hypothesis is presented.

Table 4.21

Process of accepting or rejecting the present study's hypotheses

No.	Hypothesis	% or *p*-value	Acceptance or rejection of H0 (when available) and H_1 with rationale
1.	H_1: Verbal WPV occurs more frequently than physical WPV.	Verbal WPV= 98.8% Physical WPV= 70%	H_1 accepted since the occurrence of verbal WPV occurred more often than physical WPV.
2.	H_0: Demographic characteristics are not related to the occurrence of external adult-ward based WPV. H_1: Demographic characteristics are related to the occurrence of external adult-ward based WPV.	Verbal WPV: *p*-values for age and years of experience <0.005 (*p*=<0.001) whereas *p*-values for gender, academic level, grade, employment type, shift type and country of origin >0.005 (*p*=0.213, 0.272, 0.247, 0.165, 0.252 and 0.373, respectively). Physical WPV: *p*-values for years of experience and shift type <0.005 (*p*=0.011 and 0.005) whereas *p*-values for gender, age, academic level, grade, employment type and country of origin >0.005 (*p*=0.565 0.242, 0.058, 0.152, 0.664 and 0.317, respectively).	H_0 rejected and H_1 accepted since demographic factors, namely age, years of experience, were found to significantly contribute to WPV

H0: Null hypothesis

H1: Alternative/formulated hypotheses

Table 4.21 *(continued)*

Process of accepting or rejecting the present study's hypotheses

3.	H_1: Characteristics inherent to perpetrators and in-hospital situational and environmental factors are perceived as determinants for the occurrence of external adult-ward based WPV.	Risk factors inherent to perpetrators and in-hospital situational/environmental factors were perceived as contributing factors of WPV by more than 50% of participants (ranging from 58.8 % to 80.3%).	H_1 accepted since more than half of respondents perceived these factors as contributing to WPV.
4.	H_1: Nurses' responses towards WPV are more likely to be passive (tend to do nothing/walk away/ not seeking help/underreporting).	Most reported responses: underreporting (58.9%), communicated with perpetrator (51.3%), and told friends/family/colleague (48.2%).	H_1 accepted since the most common response was passive (underreporting).
5.	H_0: Reasons for underreporting were not determined by behavioural attitudes, subjective norms and perceived behavioural control. H_1: Reasons for underreporting were determined by behavioural attitudes, subjective norms and perceived behavioural control.	Behavioural attitudes: *p*-values for 'comfort in reporting', 'felt ashamed of reporting', 'accepted WPV as part of the job' and 'perpetrator stated the meant no harm' <0.005 (<0.001). Subjective norms: *p*-values for 'belief no action will be taken', 'lack of organisational support' and 'fear that appraisal or promotions will be affected' >0.005 (p=0.333, 0.880 and 0.281, respectively) Perceived behavioural control: *p*-values for 'lack of provision to report WPV' and 'process was time-consuming' >0.05 (p= 0.081 and 0.270, respectively).	H_0 accepted and H_1 rejected since only one of the three mentioned factors significantly contributed to underreporting.

H0: Null hypothesis

H1: Alternative/formulated hypotheses

Table 4.21 *(continued)*

Process of accepting or rejecting the present study's hypotheses

6.	H_0: External WPV does not induce adverse effects on nurses' well-being (personal and psychological well-being, familial and societal relationships and/ or feelings towards the workplace). H_1: External WPV induces adverse effects on nurses' well-being (personal and psychological well-being, familial and societal relationships and/or feelings towards the workplace).	Personal well-being: more than 70% were not/mildly affected by WPV Psychological well-being: Between 39.9% and 66.8% were severely affected. Verbal WPV significantly contributed to adverse psychological well-being (p=<0.001). Physical WPV did not significantly contribute to WPV (p= >0.005). Familial and societal relationships: 73.9% and 72.3% responded not having familial and societal relationships affected, respectively. Feelings developed towards workplace: 'reduced motivation and efficiency' was significantly affected by verbal WPV (p=0.015) and physical WPV (p=0.046). 'Opting for an alternative career' was significantly impacted by physical WPV (p=0.043)	H_0 rejected and H_1 accepted since psychological well-being and feelings developed towards workplace induced adverse effects on nurses' well-being.
7.	H_1: Mitigation strategies targeted towards lessening WPV are perceived as effective amongst nurses.	Mitigation strategies were perceived as effective towards lessening WPV by more than 50% of participants (ranging from 53.9 % to 85.9%).	H_1 accepted since more than half of respondents perceived these strategies as effective in mitigating WPV.

H_0: Null hypothesis

H_1: Alternative/formulated hypotheses

As presented in Table 4.21, the first, second, third, fourth, sixth and seventh hypotheses formulated for the present study were accepted, whereas the fifth hypothesis was rejected. This shall be discussed in the following chapter.

4.10 Conclusion

This chapter illustrated findings obtained from the questionnaires utilised for this study. Results were outlined and discussed, and tables and figures were used throughout to depict and summarise salient findings. In the following chapter, results shall be discussed thoroughly in light of existent research pertaining to this topic as well as to theoretical frameworks introduced earlier in this dissertation.

Chapter 5

Discussion

5.0 Introduction

This chapter critically discusses implications of findings addressing encounters of WPV amongst nurses working in adult local hospital wards. Results will be critically analysed and compared to existing literature, and the researcher shall identify how theoretical frameworks addressed earlier guided this research.

5.1 The response rate

Eligible participants for this study were nurses working in adult local hospital wards. This focus was deemed necessary by the researcher since neither local nor international literature addressed WPV solely on ward nurses.

Questionnaires were distributed to the whole target population (*N*=426), of which 284 (67%) were returned within the time frame allocated for data collection. According to Nulty (2008), a 56% response rate is the average response rate of paper-based questionnaires, so this acquired response rate can be considered to be adequate. Furthermore, the use of Raosoft® Sample Size Calculator indicated a sufficient response rate for this study, hence findings were reliable and possessed adequate power in being representative. This is crucial since ensuring adequate representativeness assures that findings can in fact reflect the real situation being encountered by the target population, in this case nurses working in local wards.

As mentioned in the third chapter of this dissertation, the present researcher had no access to characteristics of non-responders and hence was unable to address non-response bias during data analysis. Although the response rate for this study was adequate in being representative, reducing the number of non-responders potentially enriches representativeness of the study population. Non-responders might be from a particular group, such as being of a specific age group or gender, which might cause

a shift in the representativeness of the study population and introduce limitations in generalisability of findings (Downes et al., 2016). The researcher however attempted to reduce non-response bias before data collection by utilising an established tool which was pilot tested for clarity and distributing paper-based reminders amongst participants.

5.2 Nurses' characteristics

The majority of respondents for this study were females (*n*=204, 71.8%) of a young professional age (mean age=30.8 years, mean years of experience=8.71 years). This indicated representativeness of the present study to the local context, since, as stated in the first chapter, most nurses working in the local health sector are women aged up to 34 years (Eurostat, 2022b). This is similar to the distribution of nurses within the European region up to 2018 which was reported as being 84% by Michas (2020). It also corresponds with the distribution depicted in the literature presented earlier in this dissertation (Gunaydin, & Kutlu, 2012; Sato et al., 2013; Jiao et al., 2015; Pérez-Fuentes et al., 2020; Dehghan-Chaloshtari & Ghodousi, 2020; Kim et al., 2020).

Almost all of the respondents in this study (*n*=270, 95.1%) worked on a full-time basis and 75.5% (*n*=215) worked both days and nights. These characteristics corresponded with those in studies by Jiao et al. (2015) and Kim et al. (2020) who reported that the majority of nurses worked rotating shifts and long hours, respectively. Most of this study's respondents held an Undergraduate degree (*n*=175, 61.6%), were SNs (*n*=180, 63.4%) and Maltese (*n*=244, 85.9%). There are no particular statistics published which address these characteristics. Since the researcher had no access to obtain such data, it could not be identified whether these participants characteristics were indeed representative.

5.3 Prevalence of WPV

Findings from this study revealed that WPV towards ward nurses in Malta is frequent, with the majority of respondents (*n*=252, 89%) reporting that they were exposed to one or both forms of WPV. This is relatively higher than the rate of the reported overall WPV in the studies by Gunaydin and Kutlu (2012) and Pérez-Fuentes et al. (2020) which was 64.1% and 11.8%, respectively. One possible contributing factor may be that the present study required respondents to outline the prevalence encountered throughout their whole career, whereas the aforementioned literature outlined prevalence of WPV encountered up to one year previous to the study. Nevertheless, possible reasons for the higher prevalence within the present study might be secondary to characteristics related to nurses, perpetrators and hospital environment (which will be discussed in the following section) which increased the risk of WPV.

Participants reported a higher incidence of verbal WPV (*n*=249, 98.8%), as opposed to physical WPV (*n*=177, 70%). In fact, 37.7% (*n*=107) of participants reported never experiencing physical WPV. On a monthly basis, verbal WPV was experienced by 74% (*n*=187) of participants whereas 12% (*n*=31) reported having experienced physical WPV. This confirms the first hypothesis formulated for this study; '*verbal WPV occurs more frequently than physical WPV'*. This study's findings are consistent with existing literature (Gunaydin, & Kutlu, 2012; Sato et al., 2013; Jiao et al., 2015; Pérez-Fuentes et al., 2020; Dehghan-Chaloshtari & Ghodousi, 2020; Kim et al., 2020). Findings in these studies do not state that physical WPV always occurs with or after verbal WPV but this could also be the case. If so, it would confirm Heinrich's Law of risk management (Heinrich, 1931), discussed earlier in this dissertation, where verbal WPV was presented as a possible

risk factor of physical WPV. Therefore, appropriately recognising minor injuries (verbal WPV) and not allowing escalation to occur, is necessary if many major injuries (physical WPV) are to be prevented. Prevention may be even more possible if there is an awareness of all the risk factors for WPV.

5.4 Risk factors for WPV

The second chapter of this study introduced and presented the 'Interactive Model of WPV' (Chappell and DiMartino, 1998) which illustrated associations between the occurrence of WPV and risk factors which lead to it, namely those related to victims and perpetrators as well as environmental/situational factors. Findings from this study sought to identify whether demographic factors of victims significantly led to increased occurrence of WPV. Moreover, the study sought to investigate nurses' perceptions of whether risk factors relating to the workplace environment and to the perpetrators actually increase the risk of WPV.

5.4.1 Victim demographic characteristics and the prevalence of WPV

Demographic characteristics may put some nurses at a higher risk of WPV than others. This section will discuss each characteristic in light of previous literature and sociological dimensions and perceptions.

5.4.1.1 Gender

Findings from the present study suggested that gender did not significantly correlate with the occurrence of physical (p=0.565) and verbal (p=0.213) WPV. This is consistent with findings from Jiao et al., (2015) and Pérez-Fuentes et al., (2020), where there was no statistical significance between gender and prevalence of WPV. However, a significant correlation was identified in the study by Deghan-Chaloshtari & Ghodousi (2020) between being female and the prevalence of WPV.

This may be due the fact that in Iran, female nurses are expected to occupy more caring roles in comparison to males, who are expected to have technical roles (Nasrabadi & Emami, 2006). Lanthier et al. (2018) discussed how gender may play a role in the exposure of WPV when males and females are assigned roles within specific occupation and/or work environments which might subject a specific gender to increased risks of WPV. A different scenario can be seen in European countries, Kouta and Charis (2010) discussed how attempts are being made to mitigate gender discrimination amongst nurses, aiming to provide equal opportunities to both genders. This may henceforth explain the lack of statistical significance between gender and prevalence of WPV in the present study and that conducted by Pérez-Fuentes et al., (2020).

Literature discussed by Gillespie et al. (2010) was inconsistent in determining which gender significantly correlated with the occurrence of WPV. However, the 'Interactive Model of Workplace Violence suggests that being a female increases the risk of WPV. Although no statistical significance for gender was observed for the present study, a slightly higher prevalence for both verbal and physical WPV was encountered by females (89% and 64% respectively) than males (85% and 58% respectively). The association between gender and occurrence of WPV in the model developed by Chappell and DiMartino (1998) can account for the increased prevalence of WPV amongst female respondents. This model can be used to make further implications for the overall high prevalence of WPV identified in this study; since Chappell and DiMartino (1998) imply that being female increase risks of WPV, the female predominance amongst respondents in this study might have accounted for the high prevalence of WPV amongst respondents.

5.4.1.2 Age and years of experience

In this study, age correlated negatively to verbal WPV (p=<0.001) but was not significant in determining physical WPV (p=0.242). The occurrence of verbal WPV decreased with increasing age. These findings were consistent with results from Jiao et al. (2015) who identified age to negatively correlate with verbal WPV. Gillespie et al. (2010) and Dehghan-Chaloshtari and Ghodousi (2020) similarly determined age as a characteristic of verbal WPV, while also contributing to physical WPV. On the contrary Pérez-Fuentes et al. (2020) illustrated that participants' low mean age might have potentially contributed to decreased prevalence of WPV in their study. This is because nurses who are older were potentially more likely to carry responsibilities which exposed them to WPV from perpetrators. Yet, findings from the present study and by Dehghan-Chaloshtari and Ghodousi (2020) suggested otherwise, possibly due to junior nurses having less experience in de-escalating techniques for WPV. In fact, Gillespie et al. (2010) outlined how senior nurses are more likely to be patient, adaptable and empathic around patients, hence exposing these nurses to reduced risks of WPV.

This study showed that years of experience correlated negatively to the occurrence of both verbal (p=<0.001) and physical WPV (p=0.006). Jiao et al. (2015) also identified years of experience to negatively correlate with verbal WPV. Gunaydin and Kutlu (2021), argued that their similar findings relating WPV to years of experience may be attributed to the fact that the more experienced nurses might have been potentially more likely to display professional responses and hence diffuse a potentially violent situation than novice nurses.

Chappell and DiMartino (1998) outline a relationship between being young and inexperienced and being at risk of WPV. This is consistent with the present

study, where age and years of experience significantly contributed to WPV. In the present study, nurses with less than five years' experience, worked through a time in their initial years of employment, when restrictions for visiting were at their most extreme due to the global pandemic. These nurses may be therefore less experienced in encountering and dealing with WPV than nurses who qualified earlier. The present study is the first to address the phenomenon of WPV following a global pandemic, which had to be considered by the researcher when analysing the variations in prevalence between those who are of a younger professional age and those who are more experienced. The younger nurses in this population may have indicated more WPV incidents than their older colleagues due to the latter's greater and possibly more concentrated experience of WPV that had 'trained' them regarding the response to WPV. This might explain the high prevalence of WPV encountered by the younger population in this study when compared to that of other studies such as Pérez-Fuentes et al. (2020).

Gillespie et al. (2010) also outlined that the accumulated amount of one's encounters to WPV may increase with each year, yet the frequency of yearly incidence encountered decreased with increased experience. Consequently, this leads young, inexperienced nurses to report higher yearly occurrences of WPV, but the more experienced to endure a greater number of WPV incidents throughout their lifetime. Since this study adopted a cross-sectional design and questioned respondents to outline prevalence of WPV encountered throughout their professional careers, nurses had to rely on memory of events. Hence the older and more experienced nurses were less likely to recall violent encounters which occurred throughout their initial phases of their career during which, according to Gillespie et al. (2010), these could have potentially been more frequent. On the other hand,

young and inexperienced nurses were more likely to recall the potentially more frequent series of violent encounters. This could therefore be another factor which might have contributed to a higher prevalence amongst the young and inexperienced.

5.4.1.3 Academic level

The correlation between nurses' academic level and occurrence of WPV was not illustrated in the model by Chappell and DiMartino (1998). This was however brought up in the literature review presented earlier in this dissertation; Gunaydin & Kutlu (2012) and Jiao et al. (2015) identified a direct association between academic level and increased risk of verbal WPV. However, the present study found no significant correlation between both variables (p=0.272 for verbal WPV, p=0.058 for physical WPV), therefore nurses' level of education did not increase the risk of reported WPV. The authors of the former two studies suggested that nurses holding higher degrees have greater risks of WPV because they are usually assigned roles which come with greater responsibilities. However, nurses working in the local acute hospital are not usually assigned roles with responsibility according to their academic level, but rather according to seniority. These might explain why academic level did not statistically correlate with WPV.

5.4.1.4 Nursing grade

Nursing grade did not correlate with occurrence of verbal (p=0.247) or physical (p=0.152) WPV in the present study. Similarly to academia, there was no difference in the prevalence of WPV experienced amongst nurses of different grades. This correlation was not pointed out by the aforementioned model; however, the present author developed an interest in identifying whether a relationship exists between these variables. One might expect that, since years of experience was significant in contributing to the prevalence of WPV and seniority is, to an extent,

related to experience, SSNs would encounter a prevalence which is significantly less than SNs. However, locally, seniority is not always dependent on experience; one with less years of experience having the right qualifications to become a SSN might be senior to a nurse with more years of experience who is a SN. This might therefore explain why nurses' seniority did not significantly correlate to WPV in the same pattern years of experience did.

5.4.1.5 Employment type

Gillespie et al. (2010) reported a significant correlation between long working hours and occurrence of WPV. The present study has shown no statistical significance between these variables (p=0.165 for verbal WPV, p=0.664 for physical WPV). This may be due to the large discrepancy between the number of nurses working full-time (n=270), those working part-time (n=4) and those working reduced hours (n=10). The relatively small number of the latter two compared to the former served as a limitation to the researcher to make inferences and make generalisations regarding the involvement of hours worked in the development of WPV.

5.4.1.6 Shift type

Shift type significantly contributed to WPV in this study; results have shown that nurses who work mixed shift types were more prone to physical WPV than those working days only (p=0.005). Whilst previous literature has shown that night nurses have increased risks of both physical and verbal WPV (Gillespie et al., 2010; Jiao et al., 2015; Dehghan-Chaloshtari & Ghodousi, 2020), findings from this study might suggest otherwise. Since only two night nurses participated in this study, this minority was not sufficient in determining whether working only night shifts significantly correlated to WPV. For the aforementioned literature, particularly the

latter two studies, participants were questioned whether their shift incorporated night shifts (66.3% for Jiao et al., 2015 & 87% for Dehghan-Chaloshtari & Ghodousi, 2020). These studies however do not specify whether these nurses work mixed shifts or night shifts only. Moreover, these studies were directed towards mixed hospital settings, including acute and ward-based. Since psychiatric and emergency settings tend to have a higher prevalence of WPV at night (Gillespie et al., 2010), this might have influenced results. Increased WPV from patients during the night might also be explained by the fact that night-time tends to increase the patients' risks of experiencing delirium and confusion (Zoremba & Coburn, 2019).

Chappell and DiMartino (1998) also illustrated the correlation between working alone and increased risk of WPV. Since locally, the number of nurses working night shifts are less than those working day shifts, nurses during night shifts are more likely to be in situations where they are alone with potential perpetrators. Consequently, this might increase risk of WPV at night-time. Hence, working night shifts *might* have contributed to physical WPV for this study, but this cannot be concluded with certainty. Lin et al. (2015) outlined how nurses working mixed shifts are more likely to experience work-related stress. Magnavita (2014) has discussed the adverse role stress plays in WPV, in which the stressed nurse is more prone to violent behaviour. This might be another factor which contributed to the significant correlation between working mixed shifts and the occurrence of physical WPV.

5.4.1.7 Country of origin

Country of origin showed no statistical significance in determining the occurrence of WPV (p=0.373 for verbal WPV, p=0.317 for physical WPV). None of the previous literature appraised in this dissertation attempted to identify correlations between race and risk of WPV. It was identified that 88% of Maltese nurses and 87%

of nurses of foreign origin were exposed to verbal WPV. On the other hand, 63% of Maltese nurses and 58% of nurses of foreign origin have encountered physical WPV. Percentages for verbal WPV were similar for both groups. This might suggest that perpetrators are not triggered by race. This lack of statistical significance might be secondary to cultural differences which may interfere with one's perception of WPV. A study published by Sabri et al. (2015) revealed how Asian nurses were more likely to accept workplace bullying when compared to non-Asians. The majority of foreigners in the present study were Asian (n=32, 80%). Applying the former study, this cultural tendency might influence Asian nurses' perception of WPV; even though Asian nurses may have been exposed to a substantial prevalence of WPV, this might have been disregarded. Furthermore, failure to understand language might cause foreign nurses to dismiss occurrences of WPV or not feel as insulted as Maltese nurses. This might therefore account for the lack of significant correlation between race and prevalence of WPV.

5.4.1.8 The role of demographic characteristics in occurrence of WPV

The hypothesis '*demographic characteristics are related to the occurrence of external adult-ward based WPV'* was formulated based on the 'Interactive Model of Workplace Violence' (Chappell and DiMartino, 1998), which suggests that factors related to the victim increase the risks of WPV. Demographic characteristics related to the victim such as age, years of experience and shift type were found to contribute to either one or both forms to WPV. Yet, in this study, nurses' gender, academic level, nursing grade, hours worked and country of nurses' origin did not emerge as being statistically related to WPV. This suggests that, to a certain extent, this hypothesis can be accepted with caution, as only three out of the eight characteristics tested for this study were found to statistically contribute to WPV.

5.4.2 Risk factors perceived as contributing to WPV

Risk factors perceived as contributing to WPV were either related to the perpetrator or environmental/situational factors (Table 5.1). In the previous chapter it was illustrated how the majority of participants perceived these characteristics as important risk factors for the occurrence WPV. This section shall discuss these characteristics in light of previous literature and sociological dimensions and perceptions.

Table 5.1

Distribution of perceived risk factors into categories

Perceived risk factors	Category
Unrealistic expectations of patients/relatives	Characteristics related to perpetrator
Inappropriate knowledge about the disease/health condition	
Poor communication skills	
Lack of respect for the authority of nurses	
Lack of resources	Characteristics related to situation/environment
Overcrowding	
Long waiting time	
Inadequate security arrangements	
Inadequate action on receiving complaints of WPV	
Negative and inappropriate media reporting	
Lack of the provision of harsh punishment for perpetrators	
Lack of redressal system	

5.4.2.1 Characteristics related to perpetrators

For this section 'lack of respect to the authority of nurses' was the highest cited response amongst respondents (n=228, 80.3%). Nouri et al. (2019) illustrated how lack of respect is detrimental for a nurse-patient relationship. The authors argue how lack of respect might be secondary to the nursing profession being perceived as having low intellectual prestige. According to Nouri et al. (2019), nursing may be perceived as being a working-class profession, requiring limited skills even though it requires thorough knowledge and skill. The lack of autonomy in the profession and the blind compliance with which nurses are expected to follow orders might further induce lack of respect towards the profession. This is a situation which is similar to the local context, where doctors make the majority of patient-related decisions which nurses follow. Nurses might perceive themselves as being less important and sub-professionals (Nouri et al., 2019). The authors conclude that lack of respect adversely impacts nurses' job satisfaction, reducing efficiency and patient care

which might consequently expose nurses to increased risks of WPV. This might explain why this factor is perceived as a major risk to WPV by this study's respondents.

'Poor communication skills' was cited by 77.8% (n=221) respondents. This was also identified by Jiao et al. (2015) as a determinant of WPV. Afriyie (2020) pointed out how effective communication is essential for an adequate nurse-patient relationship since it promotes quality patient care and patient satisfaction. England and Azzopardi-Muscat (2017) reported how the majority of patients in the local acute hospital are elderly. These individuals present with multiple comorbidities including psychological, such as dementia. In fact, perpetrator psychological illness was cited as a risk factor to WPV by Chappell and DiMartino (1998). Moreover, Rush et al. (2017) argued that nurses' attitudes with the elder generation is adversely impacted by elder patients' care demands and illnesses, including those psychological. Such attitudes impede nurse-patient communication and nursing care. This might in turn reflect in local results where poor communication was indicated as a risk factor to WPV amongst respondents.

'Inappropriate knowledge about the disease/health condition' and 'unrealistic expectations of patients/relatives' were cited as risk factors for WPV by 65.5% (n=186) and 64.8% (n=184) of respondents, respectively. These were consistent with the article by Gillespie et al. (2010) who stated that the stress that comes with the diagnosis often impedes patients' and relatives' understanding of the nature of a disease and treatment plan, which in turn induces unrealistic expectations, consequently leading to WPV. Although inappropriate knowledge may be due to miscommunication between healthcare providers and patients and/or relatives, the

latter might possess inadequate medical knowledge and hence might be unable to comprehend information about the health status of the patient.

5.4.2.2 Characteristics related to situation/environment

'Lack of resources' and 'long waiting time' were the most cited risk factors related to situation/environment (*n*=224, 77.8% and *n*=219, 77.1%, respectively). These were outlined by Pérez-Fuentes et al. (2020) as contributing to WPV. The study described how shortage of both resources and staff may compound WPV since this contributes to prolonged waiting as well as delayed attention, ultimately causing WPV. Nurses in local hospital wards often begin their shift with a number of patients allocated to their care for the duration of the shift. Nurse-to-patient ratios vary on daily basis since this depends on the number of nurses present. Although no evidence-based literature has been published discussing staff shortage in the local hospitals which might impede an adequate nurse-to-patient ratio, various local journalists have been pointing this out throughout recent years. Xuereb (2021), Amaira (2022) and Farrugia (2022) reported in local newspapers how the local hospital has been facing the highest rates of nurse exodus in European countries, and how this is contributing to major staff shortage. This shortage of staff, which consequently leads to higher nurse-to-patient ratios, has been pointed out as one of the influencing factors of WPV by Gillespie et al., (2010) in the initial chapter of this dissertation. This highlights the high risks nurses in local wards have in encountering WPV.

'Overcrowding' has been cited by 75.5% (*n*=215) of respondents. Gillespie et al. (2010) and Gunaydin and Kutlu (2012) identified 'overcrowding' as one of the main risk factors for WPV. Moreover, Chappell and DiMartino (1998) have described how workplaces which are perceived as busy increase the risk of WPV.

The layout in general wards in the Maltese local hospital cannot afford to have many extra beds when there is 100% capacity, which is very often the case, however, most of the patients have visitors during the whole of the visiting hours available. Since Malta is a small island, the relatively short distances to the hospital may result in visitors finding it easier to visit patients. Although shortly after the pandemic, based on personal experience, visitors seemed reluctant to visit possibly due to a fear of the possible risks of contagion, this reluctancy has subsided over time. Therefore, nurses are exposed to visitors, and potential perpetrators, for a good part of their working day, thus increasing possibilities of WPV.

'Inadequate security arrangements' (*n*=195, 68.7%), 'inadequate action on receiving complaints of WPV' (*n*=195, 68.7%), 'lack of provision of harsh punishment for perpetrators' (*n*=189, 66.5%) and 'lack of redressal system' (*n*=167, 58.8%) were frequently cited environmental/situational factors. The former factor was consistent with Gillespie et al. (2010), who asserted that the presence of security personnel has prevented violent encounters from perpetrators. In fact, calling security is the most common coping strategy for nurses when encountered with WPV (Yoo et al., 2018). The mitigating effects that the presence of security has on lessening the occurrence of WPV can especially be seen in the study by Pérez-Fuentes et al. (2020) and Gunaydin and Kutlu (2021). The former, having a prevalence of 11.8%, reported that nurses sought help from security personnel. Conversely Gunaydin and Kutlu (2021), who illustrated a prevalence of 64.1%, reported that nurses chose not to seek help, but rather accepted violent encounters as part of the job. Locally, security personnel are constantly going around the hospital. However, in the case of an incident in a ward, it may take security personnel a few minutes to get to the ward. This is different from the special units where there are

security personnel are present at all times, which might hinder perpetrators from acting in a violent manner. The remaining three determinants of WPV pertained mainly to lack of post-incident support by hospital authorities. This was consistent with other studies (Kwok et al., 2006; Kamchuchat et al., 2008) where it has been reported that respondents complained that, after reporting incidences of WPV, no actions or investigations were taken by their superiors.

'Negative and inappropriate media reporting' was a factor identified by 63.7% (*n*=181) of respondents. Geraghaty et al., (2021) illustrated how poor representations of the nursing profession through the media adversely impact nurses' self-image. This in turn might potentially provoke society to disrespect the profession, in turn exposing nurses to increased risks of WPV.

5.4.2.3 The role of perpetrator and situational/environmental risk factors

The hypothesis '*characteristics inherent to perpetrators, and in-hospital situational and environmental factors are perceived as determinants for the occurrence of external adult-ward based WPV'* was also formulated based on the 'Interactive Model of Workplace Violence' (Chappell and DiMartino, 1998). This hypothesis can be confirmed, since all of the factors mentioned in this section were perceived as very important determinants of WPV by respondets..

5.5 Response and reporting patterns

This section addresses nurses' responses to WPV, awareness and use of incident reports and nurses' attitudes towards reporting. Ajzen's (1991) 'Theory of Planned Behavior' was considered in this section to identify whether behavioral attitudes, subjective norms and perceived behavioral control affected reporting of WPV.

5.5.1 Nurses' responses to WPV

Findings of the present study show that approximately half of the study's participants (*n*=130, 51.3%) had an active response to WPV at time of encounter, indicating they told 'patients/relatives to stop'. This was consistent with the findings of Pérez-Fuentes et al. (2020) where communication was one of the key methods to reduce WPV. Respondents from the latter requested training in tackling WPV through communication. In fact, 65.5% (*n*=186) of respondents from the present study requested regular training regarding soft skills to diffuse and mitigate WPV. These findings shall be discussed in detail further on; however, this illustrates that nurses working in local wards perceive communication with perpetrators as useful in lessening WPV, and are henceforth willing to tackle such occurrences actively. Only 11.9% (*n*=30) of participants in the present study stated they took no action to WPV.

Underreporting was demonstrated amongst the majority of participants in the present study, where 58.9% (*n*=149) opted not to report WPV to seniors/managers and/or through the use of incident report forms. In fact, from the total number of respondents aware of the 'Incident Report Forms' (*n*=248, 98%) and the 'Violence and Harassment Incident Form' (*n*=146, 58%) to report WPV, only 39.1% (*n*=97) and 24.7% (*n*=36) actually utilised these forms to report WPV. Reasons for underreporting shall be discussed in the following section. These findings were consistent with the majority of studies discussed in the previous chapters, where Gunaydin & Kutlu (2012), Sato et al. (2013), Dehghan-Chaloshtari & Ghodousi (2020) and Kim et al. (2020) indicated underreporting amongst nurses. This was considered as problematic by Sato et al. (2013) who discussed that unawareness of WPV through underreporting hinders development of appropriate WPV preventive strategies. Kim et al. (2020) further asserted that as underreporting underestimates

the gravity of the situation, it undermines the severity of the problem. Underreporting diminishes the problem to hospital management, and so consequently action may not be taken with the right amount of urgency.

The most selected option for coping with WPV was 'told friends/family/colleague' (*n*=122, 48.2%). Even though this did not necessarily hinder the occurrence of WPV, almost half of the present study's respondents sought this as a helpful method of coping with WPV. Although communication can serve as a coping mechanism for various problems (Afriyie, 2020), this may be problematic in nursing mostly due to confidentiality. Locally this may be even worse due to the small size of the country, with higher possibilities of people being interconnected. The option 'took time off from work' was selected by 11.5% (*n*=29) of respondents. This was consistent with the findings of Gunaydin and Kutlu (2012), where only 8.8% took leave of absence in response to WPV. The least selected option was 'sought counselling' (*n*=15, 5.9%). As argued by Dadfar and Lester (2021), counselling is crucial for nurses who were victimised since this might potentially encourage the latter to report WPV, and seek both medical and psychological care post the incident. It is unsure whether participants did not seek counselling as it was perceived as unnecessary, since almost half of respondents (*n*=122, 48.2%) communicated with friends/family/colleagues, or because they were unaware of counselling services available locally. Nevertheless, it would be beneficial to increase awareness of these services towards nurses working in the local hospital to ensure that any victims of WPV are able to seek the help they need.

Even though respondents were more likely to tell 'patient/relative to stop' rather than taking no action in response to WPV, the majority demonstrated underreporting, hence confirming the hypothesis '*nurses' responses towards WPV*

are more likely to be passive (taking no action /underreporting'. This suggests that half of the respondents followed policy and attempted to resolve the issue at ward level. However; even though reporting these incidents was encouraged, the majority opted not to seek help from authorities and/or report WPV. The following section will discuss reasons for underreporting.

5.5.2 Reasons for underreporting

For this section, the 'Theory of Planned Behaviour' developed by Ajzen's (1991) was utilised to guide the researcher in determining factors which statistically determine underreporting amongst respondents (Table 5.2).

Table 5.2

Distribution of reasons of underreporting into categories

Reasons for underreporting	Categories according to Ajzen's Theory of Planned Behavior
Comfort in reporting Felt ashamed Accepted WPV as part of the job Perpetrator stated they meant no harm	Behavioral Attitudes
Belief no action will be taken against perpetrator Lack of organisational support Fear that appraisal or promotion avenues will be affected	Subjective Norms
Lack of provision to report incident Process was time-consuming	Perceived Behavioral Control

Initially, the present researcher assessed whether nurses' comfort in reporting WPV to competent authorities determined the actual act of reporting WPV. Findings from this study have shown that most respondents feel uncomfortable reporting WPV to higher authorities, and this influenced the occurrence of reporting WPV amongst local ward nurses (p=<0.001). This was consistent with the findings by

Kim et al. (2022) which showed that nurses perceived reporting WPV as a stressor and burden, and hence preferred to refrain from reporting such incidents.

Further analysis was conducted to determine which factors between Question C2 and C9 of the questionnaire (Appendix C) determined underreporting. 'Behavioural attitudes' and two out of three factors categorised as 'subjective norms' were perceived as significant factors by respondents in contributing to reporting WPV. One out of three factors categorised as 'subjective norms' and all factors categorised as 'perceived behavioural control' were perceived as somewhat significant. Yet, only factors categorised as 'behavioural attitudes' were actually statistically significant in determining reporting patterns (p=<0.001). According to the theory proposed by Ajzen (1991), behavioural attitudes describe one's perception of a particular behaviour. Aside from 'comfort in reporting', the present study included the following factors in the category of behavioural attitudes: 'felt ashamed of reporting', 'accepted aggressive encounters as part of the job', and 'perpetrator stated they meant no harm'. Findings indicated that respondents oversaw these three behaviours as non-maleficent, and chose to accept such behaviour as part of their job. This is problematic, especially since WPV leads to negative repercussions on well-being (as shall be discussed later on). This was consistent with the findings of Gunaydin and Kutlu (2012) and other literature (Kennedy, 2005; Gates et al., 2006; Kamchuchat et al., 2008; Qodsbin et al., 2009; Zamanzadeh et al., 2009; Gates et al., 2011; Talas et al., 2011;), where it was reported that nurses perceived WPV as part of the job and refrained from reporting such incidents. This suggests that nurses should be made aware of the fact that WPV should not be accepted as a daily routine in the workplace, and that WPV has negative impacts on well-being. This might

motivate nurses to perceive WPV as a problematic behaviour which should be reported, not ignored.

The hypothesis '*reasons for underreporting were determined by behavioural attitudes, subjective norms and perceived behavioural control*' was formulated based on the (1991) 'Theory of Planned Behaviour' by Ajzen (1991). Whilst findings have shown that 'behavioural attitudes' did contribute to underreporting, 'subjective norms' and 'perceived behavioural control' did not statistically correlate to underreporting. Since the theory asserts that all three factors determine behaviour, and in this case only one factor determined underreporting, this hypothesis was rejected.

5.6 Reported impact on nurses' well-being

The second part of the 'Interactive Model of Workplace Violence' (Chappell and DiMartino, 1998) asserts a correlation between the occurrence of WPV and the adverse consequences on one's personal and psychological well-being, familial and societal relationships as well as feelings developed towards workplace. Findings from this study sought to identify whether WPV has had adverse impacts on the well-being of this study's participants.

5.6.1 Personal well-being

Findings from this study have shown that the majority of respondents' personal well-being, in terms of 'grooming', 'fitness', eating patterns' and 'sleep schedule', was not affected or mildly affected. Only up to 6.3% (n=16) reported these factors as being severely affected by WPV. This was not consistent with literature published by Dadfar and Lester (2021) who asserted adverse physiological impacts as a consequence of being a victim of WPV. In fact, Jakobsson et al. (2020)

identified direct correlations between sleeping disorders and loss of appetite, and experiencing WPV. In the present study, between 11.1% (n=28) and 24.5% (n=62) of participants reported that personal well-being was moderately affected. In the study by Perez-Fuentes et al. (2020), 10.7% of participants experienced somatic symptoms in response to WPV. Therefore, it can be concluded that WPV minimally affected personal well-being for the majority of this study's participants.

5.6.2 Psychological well-being

The majority of participants, between 39.9% (n=101) and 66.8% (n=169) perceived WPV as severely affecting the following psychological factors, namely 'burnout', 'stress', 'anxiety', 'fear', 'increased irritability' and 'lack of confidence'. The remaining two factors; 'low self-esteem' and 'increased aggressiveness', were reported to be only moderately affected by WPV. This was consistent with literature published by Dadfar and Lester (2021) and Jakobsson et al. (2020), who asserted that WPV contributes to adverse psychological consequences. Literature discussed earlier in this dissertation outlined nurses' development of anxiety, aggressiveness, stress and exhaustion in relation to WPV (Gunaydin & Kutlu, 2012; Sato et al., 2013; Jiao et al., 2015; Kim et al., 2020) which are all consistent with the present study's findings.

Further analysis was conducted to identify correlations between psychological factors which were severely affected by WPV, and forms of WPV which contributed to these adverse effects. It was identified that whilst verbal WPV significantly correlated to severe adverse impacts on psychological well-being, no statistical significance was shown with physical WPV. Findings have shown a higher frequency of verbal rather than physical WPV amongst ward nurses. This implies that nurses are more prone to experience psychological effects which are severely

affected by verbal WPV. This was consistent with other literature where verbal WPV was more prevalent than physical WPV, and respondents mostly suffered psychological adverse impacts (Gunaydin & Kutlu, 2012, Sato et al., 2013, Jiao et al., 2015; Kim et al., 2020). Inoue et al. (2006) asserted how insults directed towards nurses had a deleterious impact on their psychological well-being. As discussed by Kobayashi et al. (2020), adverse psychological well-being needs to be managed, as this may lead to exhaustion, and reduced professional workplace efficacy, ultimately influencing patient care and safety.

5.6.3 Familial and societal relationships

The majority of participants indicated that familial (n=187, 73.8%) and societal (n=183, 72.3%) relationships were not affected or mildly affected as a consequence of WPV. This was not consistent with the findings of Jakobsson et al. (2020), which identified that stress induced by WPV usually caused adverse effects on the nurses' family and social life. However; in the present study, findings indicated that WPV did not impact family and social life. Duan et al. (2019) argued that support from family, friends and colleagues alleviate job dissatisfaction and improve physical and psychological health. In fact, almost half of respondents of this present study (n=122, 48.2%) sought comfort from friends, family and/or colleagues in response to WPV. This further accentuates the minimal impact WPV had on respondents' familial and societal relationships. Locally, since Malta is a small country, society is still relatively close knit so nurses may possibly find it easier to communicate regularly with family and friends. Hence, they may find more support than nurses in foreign countries in which long distances and cultural attitudes may impede regular or frequent contact with friends and/or family.

5.6.4 Feelings towards the workplace

In the present study 72.3% (*n*=183) participants indicated having developed adverse feelings towards their workplace, with 51% (*n*=129) selecting 'reduced motivation and/or efficiency' within their workplace in response to WPV. This was followed by 'opting for an alternative career' (*n*=104, 41.1.%). These factors were consistent with the arguments proposed by Dadfar and Lester (2021), who described 'reduced motivation' and 'leaving the workplace' as feelings developed secondary to WPV. This article and that by Kobayashi et al. (2020) discussed dangers of these factors since they both contribute to disability, increase in errors and reduced quality of patient care. Poláčková (2016) further discussed the significance that motivation plays in work performance. The author discussed how motivating employees through ensuring a supportive and understanding environment positively influence work performance along with employee efficiency and efficacy, all of which are crucial factors in healthcare. The least cited responses were 'feeling like not working' (*n*=70, 27.7%), 'changing the workplace' (*n*=67, 26.5%) and 'suicidal ideations' (*n*=6, 2.4%).

Further analysis was conducted to identify which forms of WPV contributed to the chosen responses. Findings illustrated that, whilst both verbal and physical WPV significantly contributed to 'reduced motivation and/or efficiency', only physical WPV significantly contributed to 'opting for an alternative career'. Reflecting on findings which illustrated higher prevalence of verbal than physical WPV, it can be explained why 'reduced motivation and/or efficiency' was cited more frequently than 'opting for an alternative career'. The statistical significance identified for both these factors further demonstrates the need to tackle the high

prevalence of WPV, thus ensuring nurses' well-being and willingness to stay in the profession, along with maintaining patient safety.

5.6.5 Overall impact on nurses' well-being

The findings of the present study suggest that whilst WPV causes little to no effect on nurses' personal well-being and societal and familial relationships, it plays a major role in adverse psychological outcomes. Feelings towards the workplace were also adversely affected in terms of declined motivation and work efficiency and desire to change the workplace. Based on the 'Interactive Model of Workplace Violence' (Chappell and DiMartino, 1998), the following hypothesis was formulated; '*external WPV induces adverse effects on nurses' well-being (personal and psychological well-being, familial and societal relationships, and/or feelings towards the workplace)'*. Given that WPV induced adverse effects on nurses' well-being in terms of psychological welfare and feelings developed towards workplace only, this hypothesis can be accepted.

5.7 Mitigation strategies

The last part of this study involved assessing mitigation strategies which were perceived amongst nurses as lessening external WPV. As mentioned in the previous chapter, each of the mentioned strategy was perceived as 'very important' by more than 50% of respondents. As discussed by the Occupational Safety and Health Administration (OSHA) (2002), the identification of risk factors of WPV can lead to implementation of appropriate strategies to minimise the incidence of WPV. Each mitigation strategy presented in the tool was aimed at the risk factors mentioned earlier, particularly those related to perpetrators and environmental/situational factors.

The most cited response was ‘improving healthcare facilities’ (*n*=244, 85.9%) such as improvement of nurse-patient ratios and population-bed ratios. By attempting to improve these facilities, ‘long waiting times’, ‘lack of resources’ and ‘unrealistic expectations of patients/relatives’ might be targeted and mitigated. Other strategies which scored lower amongst respondents, but were still perceived as very useful in lessening these effects included ‘improving facilities within a hospital’ (*n*=202, 71.1%) such as the availability of treatment and diagnostic tests, ‘educating patients and relatives about limitations and availabilities of resources’ (*n*=200, 70.4%) and ‘improving infrastructure facilities’ (*n*=186, 65.5%). McCullough (2011) discussed the importance of enhancing community awareness through educational programmes targeted at violence prevention. Moreover, AbuAlRub & Al-Asmar (2011) asserted the need to enhance and rebuild the image of the nursing profession within the community through mass media. This was listed as ‘sensitising authorities not to give negative statements about nurses’ and ‘unbiased media reporting’, both of which were cited the least by participants in the present study (*n*=171, 60.2% and *n*=153, 53.9% respectively). Findings pertaining to this strategy were consistent with those by Jiao et al. (2015) who identified inappropriate media reporting as a major contributor to WPV. Finally, OSHA (2002) outlined how facilities such as the installation of metal detectors and panic buttons might prevent and control the incidence of WPV. Locally, panic buttons are used, however it takes security personnel some time to reach the specific ward. Therefore, the use of panic buttons complimented with an increase in security personnel might successfully lessen occurrences of WPV. Installation of metal detectors can be particularly useful in cases of physical WPV especially since in the present study almost three quarters of respondents (70%) experienced physical WPV.

The second most selected response was ‘controlling number of relatives visiting patients’ (*n*=206, 72.5%). This may successfully reduce ‘overcrowding’; a risk factor which was cited as a major determinant of WPV in this study. This should be done with the presence and assistance of security personnel to ensure that WPV towards nurses is prevented (OSHA, 2002). Ensuring ‘strong legislative measures’ and an ‘active complaint redressal system’ was deemed necessary amongst most participants (*n*=198, 69.7% and *n*=186, 65.5% respectively). Pinar and Ucmak (2011), AbuAlRub and Al-Asmar (2011) and Moylan and Cullinan (2011) asserted the importance of these mitigation strategies. The study by Pinar and Ucmak (2011) identified that more than 55% of nurses who reported WPV received inefficient responses and support by management. The latter two studies argued that healthcare organisations should develop public policies and facilitate their implementation which assert legislative measures against WPV. Findings from the present study suggest that participants prefer that their superiors follow up the incident following the submission of a report, and to implement stronger zero-tolerance policies to effectively reduce WPV.

It was identified that 65.5% (*n*=186) and 64.8% (*n*=184) of participants requested ‘regular training of nurses regarding soft skills’ and ‘self-defense training of nurses’, respectively. This was consistent with Hahn’s (2010) study which found that more than 50% of nurses did not feel confident in managing WPV adequately and requested training and education to prevent and de-escalate WPV. This indicates that nurses perceive this as an important step in their in-service training. Moreover, OSHA (2002) asserted the importance of educating nurses about their rights and responsibilities making nurses more aware about their rights not to be subjected to risk of harm, injury or illness. This might reinforce reporting amongst nurses.

The final hypothesis formulated; '*mitigation strategies targeted towards lessening WPV are perceived as effective amongst nurses'* can be confirmed since all strategies were perceived as very useful in mitigating WPV.

5.8 Implications of findings

WPV needs to be given importance as the majority of nurses fall in the higher risk sections due to their age, experience and shift type. The present study has shown that there are environmental factors which can be modified especially by hospital management and authorities in order to reduce WPV, namely overcrowding, lack of resources, and security arrangements. Moreover, nurses should ensure that patients' health condition is communicated effectively with both patients and relatives to prevent them having unrealistic expectations and the occurrence of WPV. Appropriate representations of the healthcare system, especially through media, is crucial to maintain a respectable image of nurses within the society. Nurses need to be encouraged by hospital management to report WPV in all forms to avoid repercussions on their own health, behaviour, and attrition. Coping mechanisms sought by nurses after encountering WPV, mainly involving telling family members and friends, may not be the most effective mechanism. This is reflected in adverse impacts left on nurses' psychological well-being and negative attitudes towards the workplace after encounters with WPV, which may in turn negatively affect delivery of care. This further suggests the importance of involvement of authorities to develop on and implement local policies which aid in the management and mitigation of WPV. In this way, the workplace environment may be safer for nurses and can potentially result in improved work performance and quality of care.

5.9 Conclusion

This chapter discussed the findings from the questionnaire addressing demographics, prevalence of WPV, risk factors, nurses' responses and reported well-being, and perceived mitigation strategies. The following chapter shall conclude this dissertation.

Chapter 6

Conclusion

6.0 Introduction

This chapter summarises findings generated from the present research study. Strengths and limitations are discussed and recommendations for further research, education, policy and practice are presented.

6.1 Overview of the significance of the study

Locally, WPV in healthcare has been discussed and explored by various researchers throughout the years, focusing on WPV in psychiatric settings and the accident and emergency department (Farrugia, 2002; Teuma Custo, 2004; Gafa, 2006; Lau, 2006; Sciberras, 2008; Vella, 2011; Mintoff, 2011). Since local ward-based WPV has not yet been addressed, the present study focused on identifying the prevalence of physical and verbal WPV from patients and/or relatives in local hospital wards, risk factors which contribute to WPV, nurses' responses to WPV and reporting patterns, nurses' reported well-being, and perceptions of mitigation strategies which lessen the occurrence of WPV.

A literature review led to the retrieval of six cross-sectional studies addressing hospital-based external WPV. This review revealed that none of the studies addressed solely ward-based WPV, but focused on different hospital settings. The present study has led the author to address this gap in literature and identify this phenomenon within the local context. The 'Interactive Model of Workplace Violence' by Chappell and DiMartino (1998) and the 'Theory of Planned Behaviour' by Ajzen (1991) were the two theoretical frameworks which guided this research study.

6.2 Overview of the research methodology

A descriptive, cross-sectional, survey design was employed. The researcher utilised close-ended paper-based questionnaires, which consisted of a slightly

modified version of the ‘Questionnaire to Evaluate Workplace Violence in Healthcare Settings’ tool developed by Kumari et al. (2021). Ethical clearance was granted by FREC before data collection could be carried out. A total of 426 questionnaires were distributed to the target population for this study, which were then collected for analysis via CNs who were appointed as intermediaries by the DPO of the local acute hospital. The response rate for this study was 67%. Statistical analysis was carried out using SPSS-28. *P*-values ≤ 0.05 were considered statistically significant.

6.3 Overview of study findings

Findings revealed a relatively high incidence of WPV towards ward nurses, with 89% of respondents indicating having experienced one or both forms of WPV. Verbal WPV was experienced more often than physical WPV (98.8% and 70% respectively). Incidence of verbal WPV was shown to decrease significantly with increasing age and years of experience. Incidence of physical WPV was shown to increase significantly with less years of experience and working mixed shift types. Factors related to perpetrators and environment/situation were perceived as very important determinants of WPV by respondents. The highest scored perceived risk factor amongst nurses was ‘lack of respect for the authority of nurses’ (80.3%), whereas the least important perceived risk factor was ‘lack of redressal system’ (58.8%).

The majority of nurses (58.9%) demonstrated underreporting as a response to WPV, despite the majority being aware of available protocols to report WPV. Behavioural attitudes were found to significantly contribute to underreporting of WPV.

Psychological well-being was found to be severely affected by WPV in terms of ‘increased irritability’, ‘anxiety’, ‘fear’, ‘stress’, ‘lack of confidence’ and ‘burnout’. Verbal WPV was found to significantly correlate with the occurrence of these six factors. Moreover, feelings developed towards the workplace were also affected by WPV; ‘reduced motivation/efficiency’ was found to significantly correlate with verbal and physical WPV, whilst ‘opting for an alternative career’ was found to significantly correlate with physical WPV only.

Lastly, mitigation strategies which addressed risk factors of WPV were all perceived as very useful by respondents as lessening the occurrence of WPV. The highest scored perceived mitigation strategy amongst nurses was ‘improving health-care facilities’ (85.9%), whereas, the least important perceived item was ‘unbiased media reporting’ (53.9%).

6.4 Strengths of the study

To the knowledge of the present researcher, this study is the first to address the phenomenon of ward-based WPV at both a local and an international level. This is therefore one of the present study’s key strengths.

This study incorporated the whole target population of nurses working in local hospital wards. Moreover, the response rate and certain demographic characteristics of respondents were adequate in being reliable and representative. This implies that this study has gathered responses which could be sufficiently generalised to, and representative of, the local context.

The use of a reliable and validated tool in this study ensured findings which are credible and of high quality, hence enhancing the methodological strength. Furthermore, the tool used was simple and brief, yet managed to incorporate the

main domains of WPV (Kumari et al., 2021), including changes made by the present researcher, confirmed by local experts.

Lastly, the use of self-administered questionnaires assured participants' anonymity and confidentiality which ensured that responses lacked bias in being socially acceptable. Moreover, the use of paper-based rather than web-based questionnaires assured the incorporation of those who have limited access to the internet, hence enhancing response rate within the study.

6.5 Limitations of the study

Whilst attempts were made to made to ensure methodological strength and quality, the present study still has certain limitations. Since this was the present researcher's first attempt in conducting a quantitative study, lack of experience might still have induced potential limitations. These were however mitigated by discussion with lecturers and supervisor.

This study was solely quantitative and therefore could not capture deeper understandings of ward-based WPV, such as what is perceived as WPV by nurses or what has led to occurrence of WPV. Therefore, a mixed approach might have been more suitable to address this phenomenon. Yet, this being the author's first experience as a researcher along with time constraints, limited the possibility to pursue a research question which would lead to undertaking a mixed-method approach to this study.

Since data was acquired retrospectively, findings were primarily based on respondents' memory of occurrences of WPV, which might have instigated recall bias. Moreover, since this tool did not address a particular time frame, such as WPV that has occurred in the last month or year, respondents could not have focused on a particular period, but rather had to try and recall any episodes of WPV throughout

their careers, which might have further worsened recall bias. This might also be problematic since those who have more experience might have recalled and illustrated occurrences of WPV which occurred long ago, possibly in times where possible risk factors, such as security arrangements and hospital environment, were different and contributed to more WPV.

Lastly, demographic characteristics of the target population were not available to the researcher. Therefore, any characteristics which are not found online, could not have been known to the researcher. This limited the possibility of addressing non-response bias, since data of the whole target population is required to overcome this form of bias. This might have potentially limited generalisability of findings.

6.6 Recommendations for research

By utilising a mixed-method approach and incorporating focus groups or interviews, researchers might be able to capture in-depth information about this phenomenon, such as triggers of WPV and consequences reported by nurses. This enables exploratory and explanatory approaches in addressing the phenomenon of ward-based WPV; whilst the former addresses a phenomenon which is relatively new or hardly researched, the latter attempts to answer ‘why’ a phenomenon occurs the way it does.

Managerial support is described as playing a crucial role in supporting nurses who have encountered and have been affected by WPV (Dadfar & Lester, 2021). Hence, further research exploring ward-based WPV from the perspective of CNs and managers might be useful in better understanding and managing WPV.

6.7 Recommendations for education

Part of nurses' training programmes should be directed towards adequately identifying and managing WPV through de-escalation techniques. Focus should especially be made on novice nurses, those of a young professional age, and those working mixed shifts, since these characteristics were found to be significant determinants of WPV.

Furthermore, educating nurses about risk factors of WPV, especially those pertaining to perpetrators and situation/environment, so as to adequately prevent and/or predict WPV.

Since this study outlined that the majority of nurses (58.9%) demonstrated underreporting of WPV, educating nurses about the importance of reporting WPV and how underreporting leads to unawareness amongst authorities with regards to the severity of the problem of WPV is crucial. This will in turn determine support received from authorities and policy development towards controlling WPV.

Finally, CNs may need training in the recognition of possible risk factors and effective deescalating techniques to support their nursing staff to mitigate possible effects of WPV.

6.8 Recommendations for policy

Public policies which assert legislative measures towards public against WPV towards nurses and other members of the healthcare system should be developed and implemented.

Authorities might also consider avoiding having only junior nurses in wards, especially wards which are newly developed, since lack experience was a contributing factor for WPV.

Nurses who experience WPV should be offered time for psychological support during working hours, thus encouraging them to seek help.

6.9 Recommendations for practice

Primarily, local hospital managers should further encourage and reinforce the use of local protocols to report WPV. Any WPV reported via incident reports should be followed up by management, and any common determinants or situations should be identified and resolved. Furthermore, the 'acceptance' of WPV amongst nurses should be addressed and nurses should be educated about their rights not to be subjected to any risk of harm, injury or illness. This might in turn further reinforce reporting amongst nurses.

Nurses need to be aware of trigger factors so they can plan and care accordingly, making sure they avoid WPV. Adequate communication and ensuring patients' and/or relatives' understanding of the patients' health condition may reduce the occurrence of WPV.

In order to ensure that nurses are able to seek the support they require, authorities should enhance awareness amongst local nurses with regards to counselling services available in the local acute hospital which may aid in coping with the adverse impacts of WPV on nurses' well-being.

6.10 Reflections on learning

This study gave the present author a learning opportunity in quantitative data collection, management, analysis and interpretation. Time management was an issue, and the process was overwhelming at times, being the author's first experience. However; guidance provided from academics and clinical literature aided in overcoming these challenges. Moreover, the present author managed to gain insight

on the local situation pertaining ward-based WPV, and looks forward to share these findings to enhance awareness of its existence and its adverse impacts on nurses.

6.11 Conclusion

This study provided an insight on the prevalence of verbal and physical WPV originating from patients and/or relatives amongst nurses working within local hospital wards. Nurses' responses towards WPV along with their reported well-being were identified and addressed. The objectives of this study further illustrated risk factors and mitigation strategies which determine the prevalence of local ward-based WPV.

It may be safely concluded that the majority of ward nurses in the local acute hospital are subjected to WPV throughout their careers, leading to negative impacts to their psychological health and attitudes towards their workplace. It is crucial that nurses are made aware of their rights to work in a safe environment and the adversities that come with underreporting. It is imperative that actions are taken by local authorities to adequately mitigate the occurrence of WPV and ensure the safety of nurses in their workplace. Failure to do so might potentially result in a reduced motivated workforce, quality of care and patient safety, ultimately effecting the local healthcare system as a whole.

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Appendix A

Intermediary Agreement Letter

(Sample paper)

L-Università ta' Malta

Intermediary Name
Charge Nurse, **Name of Ward**
Mater Dei Hospital
Malta

Date

Intermediary Agreement Letter

Research Project: **"Nurses' Encounter with Workplace Violence in General Hospital Wards: A Descriptive Survey of Nurses' Response and Reported Well Being"**

Dear **Name**,

My name is Claudia Azzopardi and I am a student at the University of Malta, presently reading for a Masters of Science in Nursing. I intend to conduct a research study for my dissertation titled *"Nurses' Encounter with Workplace Violence in General Hospital Wards: A Descriptive Survey of Nurses' Response and Reported Well Being"*. The aims of this study are to: identify the incidence of workplace violence in the local acute general hospital; investigate impacts of workplace violence left on local nurses' well-being; and describe how nurses respond to being exposed to workplace violence from patients and/ or their relatives. This project is being conducted under the supervision of Dr Catherine Sharples.

I intend to carry out this study through quantitative research directed towards ward nurses working at Mater Dei Hospital. Data collection methods will involve distributing a paper-based questionnaire to approximately 300-500 nurses working in various wards within the hospital who meet the eligibility criteria for the study. The questionnaire shall include questions addressing frequency of verbal and/or physical workplace violence, the impact workplace violence has on nurses' well-being (in terms of personal care, mental and psychological well-being, and interpersonal relationships with family and the society), reasons for reporting or not reporting violent behaviour, perceptions of mitigation strategies, and any perceived risk factors which lead to workplace violence. I aim to initiate and conduct data collection during the

months of October and November 2022 or upon approval by the Faculty of Health Sciences Research Ethics Committee (FREC) to which I am submitting my research proposal.

The Data Protection Officer of Mater Dei Hospital has appointed you to act as an intermediary for the ward which you are in charge of. Alternatively, you may choose a delegate who may act as an intermediary in your place. The role of the intermediary involves approaching potential eligible participants (nurses working in the respective ward, excluding relievers and other Charge Nurses) and delivering a small envelope containing an information letter which describes the purpose and content of the study, and the questionnaire itself. As written in the information letter, the participants will then need to place the filled or unfilled questionnaire (if they choose not to participate) in the small envelope provided and seal it. The small envelopes should then be placed in the larger envelope which will be handed to you upon our first meeting and which needs to be kept in your office.

I will provide you with all materials including plain large envelopes labelled with a printed title of the study to prevent the envelopes from being mislaid. The large envelopes will be collected from your office by myself during the third week of November (should Ethical Approval be granted by then). Should there be low response rates, I will ask you to kindly remind all the nurses of your ward through printed letters which I shall provide. I will then come to your ward for the second and final time during the last week of November to collect the remaining questionnaires. The collected questionnaires will then need to be handed to me for analysis.

Nurses' participation will be entirely voluntary and participants will be free to withdraw at any point, without repercussions. Participant anonymity and confidentiality will also be maintained throughout the study. In the event that participants feel distressed due to participation in this study, the service of Ms. Mariella Meachen, a nurse and psychotherapist, will be available at no financial cost on the participant's or my part.

Signing this letter denotes your acceptance to act as an intermediary for this research study.

Should you have any questions or concerns do not hesitate to contact me on 79976270 or by e-mail claudia.azzopardi.14@um.edu.mt or my supervisor Dr Catherine Sharples on catherine.sharples@um.edu.mt or 23401210.

Thank you for your time and consideration.

Yours Sincerely,

Claudia Azzopardi
Researcher

Dr Catherine Sharples
Research Supervisor

I, accept to act as an intermediary person for the study being done by Claudia Azzopardi and will distribute the questionnaires titled *"Nurses' Encounter with Workplace Violence in General Hospital Wards: A Descriptive Survey of Nurses' Response and Reported Well Being"*.

_____

Intermediary Signature

Appendix B

Participant Information Letter

L-Università ta' Malta

Participants' Information Sheet

Dear Participant,

My name is Claudia Azzopardi and I am currently reading for a Masters of Science in Nursing at the Faculty of Health Sciences, University of Malta. As part of my course requirements, I am conducting a research study entitled, *"Nurses' Encounter with Workplace Violence in General Hospital Wards: A Descriptive Survey of Nurses' Response and Reported Well Being"*, which is being supervised by Dr Catherine Sharples. The aims of this study are: to identify the incidence of workplace violence in the local acute general hospital; investigate impacts of work place violence (WPV) left on local nurses' well-being; and describe how nurses respond to being exposed to WPV from patients and/ or their relatives. This study has been approved by the Research Ethics Committee of the Faculty of Health Sciences at the University of Malta.

You are being invited to participate in this study by filling in a self-administered questionnaire to investigate the frequency of verbal and/or physical workplace violence experienced by nurses, the impacts workplace violence has on nurses' well-being (in terms of personal care, mental and psychological well-being, and interpersonal relationships with family and the society), reasons for reporting or not reporting violent behavior, perceptions of mitigation strategies, and any risk factors which lead to workplace violence. Outcomes from this research may extend awareness of the presence of workplace violence in wards and its adverse effects, consequently instigating further reinforcement of protective measures towards local nurses.

Should you choose to participate, you will need to fill in the self-administered questionnaire attached to this information letter. Filling this questionnaire should take five to ten minutes. Note that there are no correct or incorrect answers.

The questionnaire, whether it is filled or not (in case you choose not to participate), needs to be enclosed and sealed within the small envelope containing this questionnaire so as to ensure that only the researcher will have access to your responses. The small envelope should then be placed in the larger envelope labelled **'Nurses' Encounter with Workplace Violence in General Hospital Wards: A Descriptive Survey of Nurses' Response and Reported Well Being'**, available at the Charge Nurses' office. During the last week of November and first week of December, the large envelope with all the questionnaires will be collected from the Charge Nurses' office. The method of data collection and the questionnaire does not include any

personal information that could divulge your identity. All data collected from this research shall be used solely for the purpose of this study and findings will be reported in a general way.

Data collected will be stored in an excel spreadsheet, which will be password protected in encrypted format, and will then be imported and analysed using a computer software. The questionnaire forms will be placed in a locked cupboard. This data may only be accessed by the researcher and the supervisor. Upon completion of the study, the questionnaires will be destroyed.

Your personal experience and opinion are very important and would be greatly appreciated. Yet, you are not obliged to participate in this study or to answer all the questions and you may withdraw from the study at any time without giving a reason. Furthermore, withdrawal from the study will not have any negative repercussions on you.

If you choose to participate, please note that there are no direct benefits to you. In the event that you feel distressed due to participation in this study, the service of Ms. Mariella Meachen, a nurse and psychotherapist, will be available at no financial cost on your part (contact details: mariella.meachen@gov.mt or 25454221).

Please note that filling and submitting the attached questionnaire denotes consent.

Thank you for your time and consideration. Should you have any questions or concerns do not hesitate to contact me on 79976270 or by e-mail claudia.azzopardi.14@um.edu.mt or my supervisor Dr Catherine Sharples on catherine.sharples@um.edu.mt or 23401210.

Yours Sincerely,

Claudia Azzopardi
Researcher

Dr Catherine Sharples
Research Supervisor

Appendix C

The Questionnaire

L-Università ta' Malta

Questionnaire To Evaluate Workplace Violence in Healthcare Settings

(Kumari et al., 2021)

The following questionnaire addressing workplace violence (WPV) is composed of three parts; 'Part A' includes participant demographic data, 'Part B' incorporates 1 item addressing awareness of local protocols, and 'Part C' includes 40 items which are incorporated within five sections: *'Forms of violence', 'impact of violence on nurses', 'reporting of incidents', 'mitigation strategies' and 'risk factors to health workers'.*

Kindly answer the questions by ticking the appropriate circle or writing in the appropriate spaces where applicable. Please note that there are no correct or incorrect answers. You are reminded that you are free to withdraw from completing the questionnaire at any time. Yet, your views and contribution towards this study is greatly appreciated. Please note that filling and submitting this questionnaire denotes consent for your participation in this study.

Part A: Demographic Data

1. **Gender**
   Male ○ Female ○ Prefer not to say ○
2. **Age**
   _____
3. **Highest Degree**
   Diploma ○ Degree ○ Masters ○ PhD ○
4. **Years of Experience**
   _____
5. **Position**
   Enrolled Nurse ○ Staff Nurse ○ Senior Staff Nurse ○
6. **Employment Type**
   Full- time ○ Part-time ○ Reduced hours ○
7. **Shift Type**
   Days and nights ○ Days only ○ Nights only ○
8. **Country of Origin**
   Malta ○ Other *(kindly specify)*: _____

Part B: Awareness of Local Protocols

9. **In the local general hospital, there are two forms which can be used to report incidents of physical and/or verbal workplace violence. Kindly indicate whether you are aware of their use to report these incidents**		
'Incident Report Form'	I am aware ○	I am not aware ○
'Violence/Harassment Incident Report Form'	I am aware ○	I am not aware ○

Part C: Workplace Violence in Healthcare Settings

Section A- Forms of Violence: This domain intends to assess the frequency of various forms of violence experienced by nurses from patients and/ or their relatives in general wards. Tick the most appropriate option *(Please select one answer only)*.

Question A1: How often do you experience verbal altercations (e.g., threats, abuse, exaggerated arguments, offensive comments, etc.) at your workplace?

O Nearly daily
O About once a week
O About once a month
O About once every six months
O About once a year or less
O Never

Question A2: How often do you experience physical violence (e.g., slapping, beating, thrashing, vandalizing, attack with weapons etc.) at your workplace?

O About once in a month or more
O About once every six months
O About once a year
O Less than once a year
O Never

If you answered 'Never' for BOTH A1 and A2, skip Section B and C and kindly answer Section D and E. Otherwise, continue from Section B.

Section B- Impact of incidents of violence: This domain assesses the impact of the episodes of violence from patients and/ or relatives on the various aspects of an individual's life.

Question B1: On the basis of the episodes of violence at my workplace, I have developed the following feelings *(please select one or more options as appropriate)*:

O It does not/ did not affect me at all
O I feel/ felt that motivation/ efficiency has been reduced at my work
O I feel/felt like changing my workplace
O I feel/felt like opting for an alternative career
O I feel/felt like not working at all
O I have/had self-harm/suicidal ideations

The following are statements regarding the effect of WPV on the different aspects of life. Please read the statements given below and tick the most appropriate answer (based on your experience).

	Not / Mildly Affected	Moderately Affected	Severely Affected
Question B2: How much have the episodes of violence at your workplace affected your personal wellbeing and self-care in the following aspects?			
Sleep schedule	O	O	O
Eating pattern	O	O	O
Fitness	O	O	O
Grooming	O	O	O
Question B3: "Family life is defined as the routine interactions and activities that a family have together especially with the members who live together with parents, spouse, children." How much has your family been affected due to the episodes of violence at your workplace?	O	O	O
Question B4: "Social life is defined as the part of a person's time spent doing enjoyable things with others like friends, colleagues or people living in the society other than close family members." How much has your social life been affected due to the episodes of violence at your workplace?	O	O	O
Question B5: How much have the episodes of violence at your workplace affected your mental and psychological well-being in terms of the following aspects?			
Increased aggressiveness	O	O	O
Increased irritability	O	O	O
Low self-esteem	O	O	O
Anxiety	O	O	O
Fear	O	O	O
Stress	O	O	O
Lack of confidence	O	O	O
Burnout	O	O	O

Question B6: How did you respond to the incident of violence? *(Please select one or more options as appropriate)*:

O Took no action
O Told patients/relatives to stop
O Told friends/family/colleague
O Proceeded to reporting to seniors/ management
O Completed the 'Incident Report Form'
O Completed the 'Violence/Harassment Incident Report Form'
O Sought counselling
O Took time off from work
O Other: _____

Section C- Reporting of Incidents: This domain assesses how comfortable or confident nurses are about reporting incidents of violence from patients and/or relatives to higher authorities *(please select one answer only)*.

Question C1: I would be comfortable reporting the episode/episodes of WPV to competent authorities.

O Strongly disagree
O Disagree
O Neutral
O Agree
O Strongly agree

The statements below (C2-C9) are some of the reasons why the incidents of violence are not reported to the authorities. Select the most appropriate choice in your opinion. To what extent do these following reasons lead to under-reporting?

	Significantly	Somewhat significant	Insignificantly
Question C2: Felt ashamed of reporting	○	○	○
Question C3: Accepted aggressive encounters as part of the job	○	○	○
Question C4: Felt reluctant to report an incident if patient and/or relatives stated that they did not intend harm	○	○	○
Question C5: A belief that no action will be taken against the perpetrator	○	○	○
Question C6: Lack of organizational support	○	○	○
Question C7: Lack of provision to report such incidents	○	○	○
Question C8: The process was time-consuming	○	○	○
Question C9: Fear that the appraisal or promotion avenues will be affected.	○	○	○

Section D- Mitigation Strategies: This domain focuses on strategies that can be useful in preventing episodes of WPV from patients and/or relatives. Select the most appropriate choice in your opinion. To what extent do the following measures will be useful in controlling WPV in healthcare settings? *(Please select one answer only).*

	Very useful	Somewhat useful	Not useful
Question D1: Controlling the number of relatives visiting patients	○	○	○
Question D2: Educating patients and relatives about limitations and availabilities of resources	○	○	○
Question D3: Regular training of nurses regarding soft skills (communication skills, breaking bad news, counselling skills, problem-solving skills)	○	○	○
Question D4: Self-defence training of nurses	○	○	○
Question D5: Improving healthcare facilities (nurse-patient ratio, population-bed ratio)	○	○	○
Question D6: Improving facilities within a hospital (availability of medicines and diagnostic tests)	○	○	○
Question D7: Improving Infrastructure facilities (installation of CCTVs, metal detectors, alarm system)	○	○	○
Question D8: Active complaint redressal system (system in which complaints are officially accepted and addressed)	○	○	○
Question D9: Strong legislature measures such as provision of significant punishment for offenders	○	○	○
Question D10: Unbiased media reporting	○	○	○
Question D11: Sensitizing politicians and public figures not to give immature/negative statements regarding nurses	○	○	○

Section E- Risk factors related to incidents of WPV: This domain assesses the various risk factors associated with violence in healthcare settings. What is your opinion regarding the importance of the following parameters as a reason for WPV in a healthcare setting? *(Please select one answer only).*

	Very Important	Somewhat important	Not important
Question E1: Unrealistic expectations of patients/relatives	O	O	O
Question E2: Inappropriate knowledge about the disease/health condition	O	O	O
Question E3: Poor communication skills	O	O	O
Question E4: Lack of resources (equipment and medicines, nurse-patient ratio)	O	O	O
Question E5: Overcrowding	O	O	O
Question E6: Long waiting time	O	O	O
Question E7: Inadequate security arrangements	O	O	O
Question E8: Inadequate action on receiving complaints of WPV	O	O	O
Question E9: Lack of respect for the authority of nurses	O	O	O
Question E10: Negative and inappropriate media reporting	O	O	O
Question E11: Lack of the provision of harsh punishment for aggressors/offenders	O	O	O
Question E12: Lack of redressal system	O	O	O

THANK YOU FOR YOUR TIME

Appendix D

Data Protection Clearance Letter

Data Protection Clearance Declaration Form

REF: 200/2022

I hereby declare that I will respect the confidentiality and privacy of any personal data or information that I will come across at Mater Dei and will in no circumstance disclose any such information to third parties.

I confirm that information submitted for Data Protection Clearance is correct and that I will abide with conditions issued in same clearance notice.

- **This clearance does not cover ethical approval.**
- **All documents presented to your participants must include UOM's logo.**
- **This clearance is valid for your report to be included with your dissertation only and not in medical journals or elsewhere since you are not obtaining approval from MDH legal office.**
- **This clearance is only valid for your questionnaire to be distributed as paper-based and not online.**
- **This clearance doesn't cover any form of interviews.**
- **This clearance doesn't allow patient contact / communication.**
- **Your submitted documentation must remain unchanged.**
- **What was declared during this clearance process is what you will abide to.**
- **You must abide with all the articles of the GDPR (EU) 2016 / 679 throughout the data collection process and thereafter.**
- **You are requested to submit a copy of your findings to this office at the end of your study.**
- **Please communicate with the respective Charge Nurse to present this clearance email.**

I also declare that I am aware of the provisions of the:

General Data Protection Regulation (2016)
(ref: https://idpc.org.mt/en/Pages/gdpr.aspx),
Computer misuse provisions of the Criminal Code
(ref: http://www.justiceservices.gov.mt/DownloadDocument.aspx?app=lom&itemid=8574),
and, the Professional Secrecy Act
(ref: http://www.justiceservices.gov.mt/DownloadDocument.aspx?app=lom&itemid=8844&l=1)

and that I will abide by all Government and Hospital regulations related to data, information and use of IT Systems and services (ref: http://ictpolicies.gov.mt , http://www.kura.gov.mt).

Data Protection Clearance Declaration Form

REF: 200/2022

Full Name: Claudia Azzopardi

ID/ Passport: [redacted]

Approval Date from DPO: 08th August 2022

Approval Date from CEO: 17th August 2022

Data Collection Period (From – To): November 2022 – November 2022

MDH Official Approval Names: Ms C D' Amato, Mr J Debono

Name of Study / Audit: Nurses' Encounter with Workplace Violence in General Hospital Wards: A Descriptive Survey of Nurses' Response and Reported Well Being

Applicant's Signature: _____

Appendix E

Reminder

L-Università ta' Malta

Reminder

Dear Participant,

I would like to thank you for your participation in the study I am currently carrying out, entitled: *'Nurses' Encounter with Workplace Violence in General Hospital Wards: A Descriptive Survey of Nurses' Response and Reported Well Being'*.

I have already received a number of responses in the form of filled in questionnaires which will all be very useful for my research. However, in order to be able to obtain valid and accurate results, I still need more responses to be able to complete my study.

You do not need to do anything else if you have already filled in a questionnaire. Thank you so much. If you have not yet filled out a questionnaire, you are still in time to do so. I would greatly appreciate your views and contribution to my study. May I remind you that participation is not obligatory and questionnaires are anonymous. Should you choose to participate, please fill in the questionnaire you have been given, enclose it in the envelope provided and place in the large envelope labelled with the name of the study which will be in your charge nurses' office until the 11th December 2022. Filling in the questionnaire should not take you more than five to ten minutes.

Should you require any more information, do not hesitate to contact me by email on claudia.azzopardi.14@um.edu.mt, or my supervisor Dr Catherine Sharples on catherine.sharples@um.edu.mt.

Thanking you in advance.

Yours sincerely,

Claudia Azzopardi

Researcher

Appendix F

Permission to Utilise and Amend Tool

Claudia Azzopardi <claudia.azzopardi.14@um.edu.mt> 5 Jul 2022, 13:39

to drpiyushdost

Good Afternoon Dr Piyush,
I hope this email finds you well
I am a Nursing Masters student in Malta and I am interested in conducting a quantitative study which assesses nurses' attitudes towards workplace aggression (psychological and emotional impacts, frequency and types of aggression, reporting) in a local setting. I have done some research on this topic and I have come across a study which you have published named:

'***Development and Validation of a Questionnaire to Evaluate Workplace Violence in Healthcare Settings***'.

I have read in your study that you together with your co-authors have developed a tool which addresses workplace violence within a healthcare setting.

I am sending this email so as to kindly request a copy of the tool formulated from this study. I would also like to request your kind permission to utilise this tool for my study so as to generate local data with regards to workplace aggression.

Thank you for your time and best regards
Claudia Azzopardi, SN

PIYUSH RANJAN 5 Jul 2022, 14:06

to me

The questionnaire is available free of charge on the journal's website. You are free to use the questionnaire for academic and scientific research with proper citation and acknowledgment.

You can also modify the questionnaire or translate it to a local language to suit your research.

Please let us know if you need any further help. We expect you to only use the work for research and educational purposes with proper citation and acknowledgment.

Appendix G

Coding Book for Data Interpretation and Analysis

Coding Book Developed for the Amended Version of the

'Questionnaire to Evaluate Workplace Violence in Healthcare Setting'

		Item(s)/Question(s)	Variable	Coding Instructions	Measurement Scale
Part A: Demographic Data		**ID**	Identification number	Number assigned to each survey	Scale
		Gender	Gender	1=Males, 2=Females, 3=Prefer not to say	Nominal
		Age	Age	Age in years	Scale
		Highest degree	Highest degree	1=Diploma, 2=Degree, 3=Masters, 4=PhD	Nominal
		Years of experience	Years of experience	Years of experience in years	Scale
		Nursing grade	Nursing grade	1=Enrolled nurse, 2=Staff nurse, 3=Senior staff nurse	Nominal
		Employment type	Employment type	1=Full-time, 2=Part-time, 3=Reduced hours	Nominal
		Shift type	Shift type	1=Days and nights, 2=days only, 3=Nights only	Nominal

		Country of origin	Country of origin	1=Malta, 2=Slovakia, 3=Philippines, 4=India, 5=Italy, 6=Pakistan, 7=Romania, 8=Latvia, 9=Bulgaria, 10=Serbia	Nominal
Part B: Awareness of Local Protocols		**Question 9**	Awareness of protocols	1=I am aware, 2=I am not aware	Nominal
Part C: Workplace Violence in Healthcare Settings	**Section A**	**Question A1**	Incidence of verbal WPV	1=Never, 2=About once a year or less, 3=About once every six months, 4=About once a month, 5=About once a week, 6=Nearly daily	Ordinal
		Question A2	Incidence of physical WPV	1=Never, 2=Less than once a year, 3=About once a year, 4=About once every six months, 5=About once in a month or more	Ordinal

	Section B	**Options under Question B1**	Feelings developed toward workplace	1=No, 2=Yes	Nominal
		Questions B2-B5	Personal, familial, societal and psychological well-being	1=Not/mildly affected, 2=Moderately affected, 3=Severely affected	Ordinal
		Options under Question B6	Responses to WPV	1=No, 2=Yes	Nominal
	Section C	**Question C**	Comfort in reporting WPV	1=Strongly disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strong agree	Ordinal
		Questions C2-C9	Reasons for underreporting	1=Insignificantly, 2=Somewhat significant, 3=Significantly	Ordinal
	Section D	**Question D1-D11**		1=Not useful, 2=Somewhat useful, 3-Very useful	Ordinal
	Section E	**Questions E1-E12**	Risk factors for WPV	1=Not important, 2=Somewhat important, 3=Very important	Ordinal

Other	**Ranges developed with reference to Section 4.5.1**	Ranges formulated for 'age'	1=20-29 years, 2=30-39 years, 3=40-49 years, 4=50-59 years	Ordinal
		Ranges formulated for 'years of experience'	1=5 years or less, 2=6-10 years, 3=11-15 years, 4=16-20 years, 5=21 years or more	Ordinal
	Codes developed with reference to Section 4.6.3	Reporting behavior	1=Did not report, 2=Did report	Nominal

Appendix H

Psychotherapist Agreement Letter

Ms. Maricla Meachen
Nurse and Psychotherapist
Mater Dei Hospital
Malta

5th of August, 2022

Psychotherapist Agreement Letter

Research Project: "Nurses' Encounter with Workplace Violence in General Hospital Wards: A Descriptive Survey of Nurses' Response and Reported Well Being"

Dear Ms. Meachen,

My name is Claudia Azzopardi and I am a student at the University of Malta, and reading for a Masters of Science in Nursing. I intend to conduct a research study for my dissertation titled ***"Nurses' Encounter with Workplace Violence in General Hospital Wards: A Descriptive Survey of Nurses' Response and Reported Well Being"***. The aims of this study are: to identify the incidence of workplace violence in the local acute general hospital; investigate impacts of workplace violence left on local nurses' well-being; and describe how nurses respond to being exposed to workplace violence from patients and/ or their relatives. This project is supervised by Dr Catherine Sharples.

I intend to carry out this study through quantitative research, and it will be directed towards ward nurses working at Mater Dei Hospital. Data collection methods will involve distributing a paper-based questionnaire to nurses working in various wards within the hospital. Nurses' participation will be entirely voluntary and participants will be free to withdraw at any point, without any repercussions. Participant anonymity and confidentiality will be maintained throughout the study. I will also be applying for approval of the study from the Faculty of Health Sciences Research Ethics Committee (FREC).

Due to the sensitive nature of this study, I am kindly requesting your assistance in offering psychological help to any participant who is adversely affected by participating in this study. I understand that this assistance will involve no costs for participants or the researcher. Through this letter I would like to also request permission to include your work contact details within

the information letter which will be distributed to potential participants before completing the questionnaire. Signing the lower part of this letter denotes your intention to kindly assist in this research.

Thank you for your time and consideration. Should you have any questions or concerns do not hesitate to contact me on 79976270 or by e-mail claudia.azzopardi.14@um.edu.mt or my supervisor Dr Catherine Sharples on catherine.sharples@um.edu.mt or 23401210.

Yours Sincerely,

Claudia Azzopardi
Researcher

Dr Catherine Sharples
Research Supervisor

I agree to assist in this research and find no objection to my details being printed on the information being distributed to nurses working at Mater Dei Hospital accompanying the questionnaire. My details which will be reproduced in the questionnaire are: Ms Mariella meachen, Nurse and Psychotherapist, Contact Number: 25454221.

Ms. Mariella Meachen
Psychotherapist

Appendix I

Ethical Clearance

Mail

Re: FHS-2022-00309 Claudia Azzopardi

RP

Rita Pace Parascandalo <rita.pace-parascandalo@um.edu.mt>
20/10/2022 08:12

To: Catherine Sharples Cc: Research Ethics HEALTHSCI; claudia.azzopardi.14@um.edu.mt

Dear Claudia,

your recent amendments have been reviewed and approval is granted oBo FREC. You may proceed with your study accordingly.

Good luck

Kind regards
Dr Rita PP

Appendix J

Permissions Sought from the Local Acute Hospital Authorities

Appendix J1: CEO Approval Letter

From: **CEO at Health-MDH** <ceo.mdh@gov.mt>
To: **Claudia Azzopardi** <claudia.azzopardi.14@um.edu.mt>
Subject: RE: Request for Approval
Date: 17.08.2022 06:29:55 (+02:00)

Ms Azzopardi,
Kindly note that approval has been given by Ms Celia Falzon for you to conduct this study in line with applicable hospital protocols.
Regards

Carmen Farrugia
Personal Assistant To CEO

SPTAR MATER DEI

T +356 +356 25454102
E carmen.farrugia@gov.mt

Mater Dei Hospital, Triq Id-Donaturi tad-Demm, l-Imsida, Malta MSD 2090 | Tel +356 2545 0000 | https://deputyprimeminister.gov.mt/en/MDH/Pages/Home.aspx |
https://www.facebook.com/materdeihospital/

From: Claudia Azzopardi <claudia.azzopardi.14@um.edu.mt>
Sent: Wednesday, 10 August 2022 17:45
To: CEO at Health-MDH <ceo.mdh@gov.mt>
Subject: Request for Approval

Research Project: "Nurses' Encounter with Workplace Violence in General Hospital Wards: A Descriptive Survey of Nurses' Response and Reported Well Being"

Dear Ms. Falzon,

My name is Claudia Azzopardi and I am a student at the Faculty of Health Sciences, University of Malta, presently reading for a Masters of Science in Nursing. I intend to conduct a research study for my dissertation titled ***"Nurses' Encounter with Workplace Violence in General Hospital Wards: A Descriptive Survey of Nurses' Response and Reported Well Being"***. The aims of this study are: to identify the incidence of workplace violence in the local acute general hospital; investigate impacts of workplace violence left on local nurses' well-being; and describe how nurses respond to being exposed to workplace violence from patients and/ or their relatives. This project will be conducted under the supervision of Dr Catherine Sharples.

I am hereby seeking your permission to conduct a quantitative research study directed towards ward nurses working at Mater Dei Hospital. I will be submitting an application for approval from the Faculty of Health Sciences Research Ethics Committee (FREC).

Data collection methods will involve distributing a paper-based self-administered questionnaire to approximately 300-500 nurses working in various wards within the hospital. The questionnaire will include questions addressing frequency of verbal and/or physical workplace violence, the impacts workplace violence has on nurses' well-being (in terms of personal care, mental and psychological well-being, and interpersonal relationships with family and the society), reasons for reporting or not reporting violent behavior, perceptions of mitigation strategies, and perceived risk factors which may lead to workplace violence.

I will distribute the self-administered questionnaires to Charge Nurses of wards eligible for this study, along with an information letter for participants which will include a description of the purpose and content of the questionnaire. Eligible participants will be asked by their Charge Nurse, who will act as an intermediary, to answer one questionnaire voluntarily and will be informed that filling in the questionnaire will be considered as consent for participation. Each ward nurse will be instructed by their Charge Nurse to place their questionnaire in a small envelope which will be provided with the questionnaire. The small envelopes containing questionnaires of the ward will be then collected in a larger envelope. Both the small and large envelopes will be labelled with a printed form of this study's title. I will then collect these envelopes during the third and fifth week of November. I aim to initiate and conduct data collection during October and November 2022 or upon permission being granted by the Faculty Research Ethics Committee (FREC).

In the event that participants feel distressed due to participation in this study, Ms. Mariella Meachen, a nurse and psychotherapist, will be available to provide the necessary services at no financial cost on the participants' or my part. Her workplace details will be included in the participants' information letter.

Participation will be entirely voluntary and participants will be free to withdraw at any point, without any repercussions. Data collected will be stored in an excel spreadsheet and analysed using a computer software. The questionnaires will be placed in a locked cupboard, which can only be accessed by myself, and Dr Sharples if necessary. Upon completion of the study, the questionnaires will be destroyed.

Anonymity and confidentiality will be maintained throughout the study. No identifying information of eligible potential participants will be shown anywhere in the study, nor in any published material that may result thereafter.

Through this email, I am therefore requesting your permission and approval to access participants in the aforementioned manner and to schedule a meeting at your earliest convenience to kindly sign an agreement letter which I will be supplying. I have contacted the Data Protection Officer of Mater Dei Hospital and acquired clearance to conduct this research. Ms D'Amato and Mr Debono have also approved my research study. Should you require further information, please do not hesitate to contact me.

Thank you for your kind consideration of this request.

Sincerely,

Claudia Azzopardi

Appendix J2: Approval from Medical Director

Cutajar Graziella at Health-MDH

From: Claudia Azzopardi <claudia.azzopardi.14@um.edu.mt>
Sent: Tuesday, 09 August 2022 10:59
To: Cutajar Graziella at Health-MDH
Subject: Re: FW: [AUTOMATED] - Scanned from a Xerox Multifunction Printer
Attachments: Dr Joe Debono_signed.pdf

Approved

CAUTION: This email originated from OUTSIDE the Government Email Infrastructure. DO NOT CLICK LINKS or OPEN attachments unless you recognise the sender and know the content is safe.

Good morning
Hope this email finds you well

In continuation with the previous email, due to the DPO requests, I had to make some changes in my method of data collection (changes done in paragraph 4).
Kindly find attached the modified request form for your perusal, and if approved, I would greatly appreciate if you could kindly stamp and sign the modified document.
Many thanks and best regards
Claudia

On Wed, 3 Aug 2022 at 10:54, Cutajar Graziella at Health-MDH <graziella.m.cutajar@gov.mt> wrote:
Dear Claudia,

Kindly find attached approved for your study research.

Thanks

Graziella

Mr. J. Debono
MD FRCSEd (Gen.Surg)
Medical Director
Mater Dei Hospital MSD 2090

-----Original Message-----
From: scans@gov.mt <scans@gov.mt>
Sent: Wednesday, 03 August 2022 11:17
To: Cutajar Graziella at Health-MDH <graziella.m.cutajar@gov.mt>
Subject: [AUTOMATED] - Scanned from a Xerox Multifunction Printer

Please open the attached document. It was scanned and sent to you using a Xerox Multifunction Printer.

Attachment File Type: pdf, Multi-Page

Multifunction Printer Location: CEO Office
Device Name: prn191500

For more information on Xerox products and solutions, please visit http://www.xerox.com

Mr Joe Debono
Medical Director
Mater Dei Hospital
Malta

9th of August, 2022

Request for permission to conduct research at Mater Dei Hospital

Research Project: "Nurses' Encounter with Workplace Violence in General Hospital Wards: A Descriptive Survey of Nurses' Response and Reported Well Being"

Dear Mr Debono,

My name is Claudia Azzopardi and I am a student at the Faculty of Health Sciences, University of Malta, presently reading for a Masters of Science in Nursing. I intend to conduct a research study for my dissertation titled ***"Nurses' Encounter with Workplace Violence in General Hospital Wards: A Descriptive Survey of Nurses' Response and Reported Well Being"***. The aims of this study are: to identify the incidence of workplace violence in the local acute general hospital; investigate impacts of workplace violence left on local nurses' well-being; and describe how nurses respond to being exposed to workplace violence from patients and/ or their relatives. This project will be conducted under the supervision of Dr Catherine Sharples.

I am hereby seeking your permission to conduct a quantitative research study directed towards ward nurses working at Mater Dei Hospital. I will be submitting an application for approval from the Faculty of Health Sciences Research Ethics Committee (FREC).

Data collection methods will involve distributing a paper-based self-administered questionnaire to approximately 300-500 nurses working in various wards within the hospital. The questionnaire will include questions addressing frequency of verbal and/or physical workplace violence, the impacts workplace violence has on nurses' well-being (in terms of personal care, mental and psychological well-being, and interpersonal relationships with family and the society), reasons for reporting or not reporting violent behavior, perceptions of mitigation strategies, and perceived risk factors which may lead to workplace violence.

I will distribute the self-administered questionnaires to Charge Nurses of wards eligible for this study, along with an information letter for participants which will include a description of the purpose and content of the questionnaire. Eligible participants will be asked by their Charge Nurse, who will act as an intermediary, to answer one questionnaire voluntarily and will be informed that filling in the questionnaire will be considered as consent for participation. Each ward nurse will be instructed by their Charge Nurse to place their questionnaire in a small envelope which will be provided with the questionnaire. The small envelopes containing questionnaires of the ward will be then collected in a larger envelope. Both the small and large envelopes will be labelled with a printed form of this study's title. I will then collect these envelopes during the third and fifth week of November. I aim to initiate and conduct data collection during October and November 2022 or upon permission being granted by the Faculty Research Ethics Committee (FREC).

In the event that participants feel distressed due to participation in this study, Ms. Mariella Meachen, a nurse and psychotherapist, will be available to provide the necessary services at no financial cost on the participants' or my part. Her workplace details will be included in the participants' information letter.

Participation will be entirely voluntary and participants will be free to withdraw at any point, without any repercussions. Data collected will be stored in an excel spreadsheet and analysed using a computer software. The questionnaires will be placed in a locked cupboard, which can only be accessed by myself, and Dr Sharples if necessary. Upon completion of the study, the questionnaires will be destroyed.

Anonymity and confidentiality will be maintained throughout the study. No identifying information of eligible potential participants will be shown anywhere in the study, nor in any published material that may result thereafter.

I am therefore requesting your permission and approval to access participants in the aforementioned manner. I will be contacting the Data Protection Officer of Mater Dei Hospital upon your authorisation, for approval from their end. Should you require further information, please do not hesitate to contact me or my supervisor; both our contact details are provided below.

Thank you for your kind consideration of this request.

Sincerely,

Claudia Azzopardi
Researcher
claudia.azzopardi.14@um.edu.mt

Dr Catherine Sharples
Research Supervisor
catherine.sharples@um.edu.mt
23401210

Appendix J3: Approval from Nursing Director

Ms. Carmen D'Amato
Nursing and Midwifery Director
Mater Dei Hospital
Malta

Approved.
D'Amato

Ms. Carmen D'amato
Director Nursing & Midwifery Services
Mater Dei Hospital
Tel. 25454202

9th of August, 2022

Request for permission to conduct research at Mater Dei Hospital

Research Project: "Nurses' Encounter with Workplace Violence in General Hospital Wards: A Descriptive Survey of Nurses' Response and Reported Well Being"

Dear Ms D'Amato,

My name is Claudia Azzopardi and I am a student at the Faculty of Health Sciences, University of Malta, presently reading for a Masters of Science in Nursing. I intend to conduct a research study for my dissertation titled ***"Nurses' Encounter with Workplace Violence in General Hospital Wards: A Descriptive Survey of Nurses' Response and Reported Well Being"***. The aims of this study are: to identify the incidence of workplace violence in the local acute general hospital; investigate impacts of workplace violence left on local nurses' well-being; and describe how nurses respond to being exposed to workplace violence from patients and/ or their relatives. This project will be conducted under the supervision of Dr Catherine Sharples.

I am hereby seeking your permission to conduct a quantitative research study directed towards ward nurses working at Mater Dei Hospital. I will be submitting an application for approval from the Faculty of Health Sciences Research Ethics Committee (FREC).

Data collection methods will involve distributing a paper-based self-administered questionnaire to approximately 300-500 nurses working in various wards within the hospital. The questionnaire will include questions addressing frequency of verbal and/or physical workplace violence, the impacts workplace violence has on nurses' well-being (in terms of personal care, mental and psychological well-being, and interpersonal relationships with

family and the society), reasons for reporting or not reporting violent behavior, perceptions of mitigation strategies, and perceived risk factors which may lead to workplace violence.

I will distribute the self-administered questionnaires to Charge Nurses of wards eligible for this study, along with an information letter for participants which will include a description of the purpose and content of the questionnaire. Eligible participants will be asked by their Charge Nurse, who will act as an intermediary, to answer one questionnaire voluntarily and will be informed that filling in the questionnaire will be considered as consent for participation. Each ward nurse will be instructed by their Charge Nurse to place their questionnaire in a small envelope which will be provided with the questionnaire. The small envelopes containing questionnaires of the ward will be then collected in a larger envelope. Both the small and large envelopes will be labelled with a printed form of this study's title. I will then collect these envelopes during the third and fifth week of November. I aim to initiate and conduct data collection during October and November 2022 or upon permission being granted by the Faculty Research Ethics Committee (FREC).

In the event that participants feel distressed due to participation in this study, Ms. Mariella Meachen, a nurse and psychotherapist, will be available to provide the necessary services at no financial cost on the participants' or my part. Her workplace details will be included in the participants' information letter.

Participation will be entirely voluntary and participants will be free to withdraw at any point, without any repercussions. Data collected will be stored in an excel spreadsheet and analysed using a computer software. The questionnaires will be placed in a locked cupboard, which can only be accessed by myself, and Dr Sharples if necessary. Upon completion of the study, the questionnaires will be destroyed.

Anonymity and confidentiality will be maintained throughout the study. No identifying information of eligible potential participants will be shown anywhere in the study, nor in any published material that may result thereafter.

I am therefore requesting your permission and approval to access participants in the aforementioned manner. I will be contacting the Data Protection Officer of Mater Dei Hospital upon your authorisation, for approval from their end. Should you require further

information, please do not hesitate to contact me or my supervisor; both our contact details are provided below.

Thank you for your kind consideration of this request.

Sincerely,

Claudia Azzopardi
Researcher
claudia.azzopardi.14@um.edu.mt

Dr Catherine Sharples
Research Supervisor
catherine.sharples@um.edu.mt
23401210