Occupational Violence

against

Health Workers

(global insights with focus on India)

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India

International Course in Health Development,

16 September 2019 – 04 September 2020.

KIT Royal Tropical Institute

Health Education/

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Occupational Violence against Health Workers (global insights with focus on India)

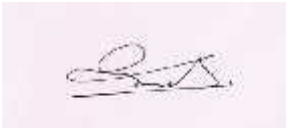
A thesis submitted in partial fulfilment of the requirement for the degree of Master of Science in Public Health by Gopukrishnan S. Pillai,

India.

Declaration: Where other people's work has been used (from either a printed source, internet or any other source), this has been carefully acknowledged and referenced in accordance with departmental requirements.

The thesis "Occupational Violence against Health Workers (global insights with focus on India)" is my own work.

Signature:



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List of Abbreviations

S No	Abbreviation	Expansion
1.	CF	Conceptual Framework
2.	DHFW	Department of Health and Family Welfare (Govt of India)
3.	ED	Emergency Department
4.	FIR	First Information Report
5.	GDP	Gross Domestic Product
6.	GoI	Government of India
7.	HF	Health Facility
8.	HW	Health Workers
9.	ILO	International Labour Organisation
10.	IMA	Indian Medical Association
11.	KIT	Royal Tropical Institute Amsterdam
12.	LMIC	Low and Middle Income Country
13.	NNA	National Nursing Association
14.	ObG	Obstetrics and Gynaecology department
15.	OOP	Out-of-Pocket
16.	PTSD	Post-Traumatic Stress Disorder
17.	RF	Risk Factor
18.	THE	Total Health Expenditure
19.	UHC	Universal Health Coverage
20.	WHO	World Health Organisation
21.	WPV	Workplace Violence

22.	WPVH	Workplace Violence in Healthcare Sector

Glossary of terms used

1. Abuse: “Behaviour that humiliates, degrades or otherwise indicates a lack of respect for the dignity and worth of an individual”(1:p.4).

2. Aggression: Aggression is defined as the “infliction, or threat, of harm or injury (either physical or psychological) upon another person. It includes verbal, physical or psychological abuse, threats or intimidating behaviour, intentional physical attacks such as hitting, pinching or scratching, aggravated assault, threats with an offensive weapon, sexual harassment or sexual assault”(2:p.10)

3. Bullying refers to passive-aggressive behaviour that occurs over a period of time, where the survivors feel that they experience negative actions and behaviours from others. These may be perpetrated either by a single individual or by several persons acting in concert(3). Bullying commonly manifests in being humiliated or ridiculed or having key areas of responsibility replaced with trivial or unpleasant tasks(4). Subtle forms of bullying include having one’s opinions and views ignored, having decisions systematically challenged, preventing access to telephones or computers, withholding information that is important to effective task performance, having to meet unreasonable targets or impossible deadlines etc.

4. Emotional Abuse: “Intentional use of power, including threat of physical force, against another person or group, that can result in harm to physical, mental, spiritual, moral or social development”(5:p.4).

5. Healthcare Facility: “Healthcare facilities are hospitals, primary health-care centres, isolation camps, burn patient units, feeding centres and others”(6).

6. Health Worker: “All paid workers employed in organizations or institutions whose primary intent is to improve health as well as those whose personal actions are primarily intended to improve health but who work for other types of organizations” (8:p.1).

7. Physical Violence is “the use of physical force against another person or group, that results in physical, sexual or psychological harm and includes beating, kicking, slapping, stabbing, shooting, pushing, biting, pinching, among others”(5:p.3)

8. Quality of Care: “The extent to which health care services provided to individuals and patient populations improve desired health outcomes. In order to achieve this, health care must be safe, effective, timely, efficient, equitable and people-centred”(8)

9. Sexual harassment: “Unwelcome sexual advances, requests for sexual favours, and other verbal or physical conduct of a sexual nature . . . when this conduct explicitly or implicitly affects an individual’s employment, unreasonably interferes with an individual’s work performance, or creates an intimidating, hostile, or offensive work environment”(9).

10. Violence: “The intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment or deprivation”(10:p.5)

11. Workplace: “Any health care facility, whatever the size, location (urban or rural) and the type of service(s) provided, including major referral hospitals of large cities, regional and district hospitals, health care centres, clinics, community health posts, rehabilitation centres, long-term care facilities, general practitioners’ offices, other independent health care professionals. In the case of services performed outside the health care facility, such as ambulance services or home care, any place where such services are performed will be considered a workplace”(5:p.5).

12. Workplace Violence: Workplace violence is defined as “incidents where staff are abused, threatened or assaulted in circumstances related to their work, including commuting to and from work, involving an explicit or implicit challenge to their safety, well-being or health”(5:p.3).

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12th August, 2020

Abstract

Background: Health Workers (HW) face many forms of abuse and violence at work, both from clients as well colleagues. Exposure to Workplace Violence (WPV) has adverse impact on physical and mental health of HW, and could affect quality of patient care.

General Objective: This thesis aims to describe the determinants of WPV in the Healthcare Sector (WPVH), and interventions against it, both globally and in India.

Methods: A systematic search of scientific literature is carried out, using the ecological framework of Dieleman, Syurina and Raven. Four databases are searched: Pubmed, Web of Science, CINAHL and Cochrane Review. Review articles and original research from India published in English in or after 2010 are retrieved.

Results: WPVH is under-stated and under-reported, both globally and in India. Nearly 70% of Health Workers (HW) globally face some form of violence or harassment at work every year (Verbal, Psychological, Physical or Sexual). Younger and less-experienced workers are more likely to face violence at work. Women face more verbal violence and men are at higher risk of physical violence. Organisational culture is the biggest determinant of WPVH, with hierarchy-focused workplaces experiencing more WPV than those that oriented towards relations, innovation or task-performance. Interventions against WPVH have organisational, environmental, training and post-incident support components. Effective strategy often involves interventions with more than one component.

Conclusions: WPVH has roots in poor quality of health system management. Addressing it needs concerted efforts to improve the quality of health system management in the country. Participative processes within hospitals go hand-in-hand with sector-wide approaches that emphasise formal liaison with law enforcement and media. There is paucity of research from India regarding effective interventions against WPVH.

Key Words: Workplace Violence in Health Sector, Lateral Violence, prevalence, prevention, intervention.

1. Introduction

As a physician with more than a decade of experience working in diverse settings in India, I have interacted or worked with many doctors, nurses and other health workers who have faced verbal or physical violence at the workplace. The perpetrator is usually a patient or a family member/ visitor who is not satisfied with the perceived standard of care or treatment outcome. The experience had caused most survivors to be cynical and demotivated at work, and many had recurrent flashbacks for years after the incident.

I have observed that aggression towards health workers is rooted in long-standing deficiencies in health system, that are often beyond the control of health workers at the frontlines of patient care. However, violence worsens the very problems it is purported to solve, leading to a vicious cycle. This thesis makes the case that a comprehensive public health approach should be directed to preventing and mitigating violence within the health system, incorporated at all levels of health governance. Strikes, which inconvenience patients, will not have the desired long-term impact unless they lead to solutions that address the root causes of healthcare violence.

My recent interest in the subject stems from a high profile legal case in the Supreme Court of India, regarding withdrawal of artificial life support to a nurse who was left in permanent vegetative state for 42 years following aggravated sexual assault by a co-worker at her place of work. The case led to changes in law regarding artificial life support in India(11). As a doctor of Palliative and End of Life Care, this case had implications for my professional practice. At the same time, the tragedy of Aruna Shanbaug, the 25 year old nurse at the centre of the story, affected me at a personal level. This led me to choose the subject of occupational violence faced by health workers, not only from clients but also from each other, as the subject matter of this thesis.

Aruna Shanbaug, a 25-year old nurse in Mumbai, was left in a permanent vegetative state for 42 years after aggravated sexual assault at her place of work by a co-worker in the year 1973.

2. Background

India is the second most populous country in the world, with a population of nearly 1.37 Billion(12). The country has a Parliamentary Democratic form of governance, with an elected President as the head of State(13). India has a federal structure, with a powerful government at the centre led by a Prime Minister. The Federal (or Central) government (based in New Delhi) shares power with 28 'States', each led by a Chief Minister. States in India are culturally and linguistically distinct semi-autonomous regions with constitutional status(14). Many subjects, including public health and maintenance of law and order, are the responsibility of State Governments in India. Some other subjects such as drugs (quality and control), professional regulation of doctors etc fall under the so-called 'Concurrent list', where both Central and State governments have shared authority. The Central Government in India has much more financial and policy power than State Governments, even over subjects that are primarily the responsibility of States. This is unlike most other countries with in a Federal Structure (such as, for e.g., the U.S.A or Germany). This asymmetric power-sharing arrangement has been described as Quasi-Federalism or Qualified Federalism(15).

Fiscal Federalism in India: Even though responsibility for healthcare of the population primarily lies with governments at the State level, most government revenues via direct and indirect taxation are deposited with the Central government. These revenues are then re-distributed to States by the Finance Commission, either as inter-governmental transfers (grants or loans) to particular states, or in the form of centrally-funded programs such as the National Health Mission(16). The federal government also makes substantial direct investments for developing healthcare infrastructure in the country, by setting up and managing various institutes of excellence. In addition, it also holds responsibility for implementing various national programs targeting particular diseases, such as Tuberculosis or HIV. This arrangement has led to a situation whereby State governments are primarily responsible for healthcare and program implementation, but Central government is substantially in charge of health policy making(17).

Health System in India: A three-tiered public health system exists in most States of India(18). A network of Primary Health Clinics at the village level provide first line care under the charge of one or more generalist medical officers. First Referral Units in larger population centres have facilities for inpatient care and minor surgeries. Tertiary care hospitals are located at the district and State headquarters. The latter are often also teaching hospitals. Together, they carry out dual tasks of providing healthcare services to the population, in addition to duties that are more aligned to the goals of disease prevention and surveillance. As mentioned previously, there are also national 'Centres of Excellence' under the Central Government. These are administered by the Dept. of Health and Family Welfare (DHFW) under the Ministry of Health. The DHFW is also in charge of various programs for disease control, the National Health Mission, Drugs Control etc. In addition to DHFW, the ministry also has a department of health research. Since 2014, the various Indian systems of medicine and Homeopathy are grouped under a separate 'AYUSH' ministry(19). Figure-1 gives an overview of the organisation of the Health System in India at the Central Government level.

Evolution of Right to Health in India: In principle, all citizens of India have guaranteed access to cash-less healthcare via the public health system. This is keeping with the spirit of Constitutional Provisions under Part-4 of the Constitution (the so-called 'Directive Principles of State Policy'), which calls for universal health coverage to the entire population as soon as the State could afford it(20). However, in practice the so-called Government Hospitals have tended to be poorly equipped, under-supplied and under-staffed. Even though technically free, there are numerous direct and indirect costs (such as medicines, investigations etc) as well as informal payments that are to be made

by patients. These lead to delay in treatment or at times even denial of care, which leads to preventable deaths. In 1983, the Supreme Court of India stepped in, frustrated with the lack of progress towards Universal Health Coverage (UHC) in the country despite Constitutional provisions calling upon the state to provide the same. Healthcare was interpreted as implicitly guaranteed under Article 21 of the Constitution, which guarantees 'Right to Life' to all citizens(21). In doing so, 'Right to Health' was made a direct obligation drawn upon the State, on par with the Fundamental Rights. This is relevant to the subject matter of this thesis, since the Supreme Court of India acts as a as a Court of Record, and its pronouncements on various subjects influence and guide the judicial position of lower courts, both in letter and in spirit.

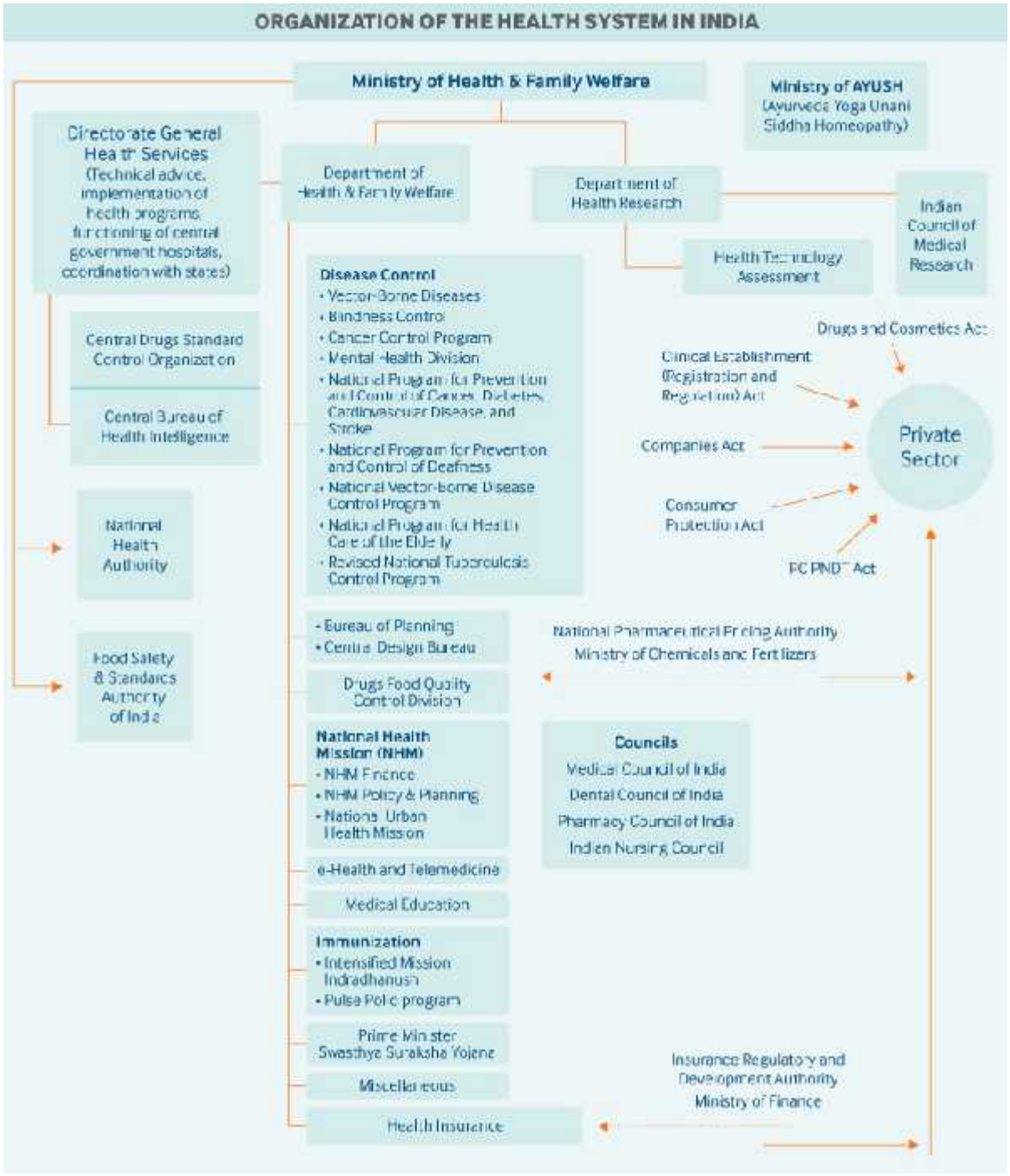

Figure 1: Organisation of the Health System in India (Indrani Gupta/ The Commonwealth Fund)

Private Healthcare System in India: Most healthcare in the country is provided by the private sector, which employs 4 out of 5 doctors in the country(22). Already in 2002, private hospitals accounted for 82% of outpatient visits, 58% of inpatient expenditure, and 40% institutional births in India(22). Whereas in the past most private hospitals in India were doctor-owned facilities, over the past two decades there has been a growing trend of corporatisation in the health system. In addition to establishing large private hospitals, the corporate sector has also taken over the function of many medium sized hospitals hitherto run as charitable enterprises(23). Nevertheless, private hospitals in India are arguably among the least expensive globally at the point of service delivery, as evidenced by the robust Medical Value Travel industry in the country(24).

Current state of UHC in India: Universal Health Coverage requires spending a minimum of 4-5% of the national GDP on health(25). Countries that spend below this benchmark are at high risk of catastrophic health expenses, defined as Out of Pocket (OOP) expenses greater than 20% of total health expenditure or THE(26). Despite the pro-active stand of the judiciary, Government of India (GoI) spends less than 1% of the Gross Domestic Product (GDP) on health, which is among the lowest per capita public funding on health globally. There are ineffective pooled funding arrangements for the general population. Private health insurance has poor penetration in India, and the concept is neither clear nor popular among a large section of the population as yet(27). According to World Bank data, nearly 68% of healthcare expenses in the country are borne OOP(28). Catastrophic health expenditures pushing families into poverty is well-documented in India(29). Families faced with hospital bills that they are unable to pay are more likely to resort to violence against health workers in private hospitals(23,30).

Policing in India: Policing in India faces many of the same challenges as the public health system. Although law and order is a State subject, the Federal Government through the Ministry of Home Affairs exerts considerable financial and administrative power over police forces in the States. Police departments, especially in the Northern parts of the country, are severely understaffed(31). There is no clear distinction between police officials who are entrusted with law and order responsibilities, and those who are engaged in specialised functions such as investigations, VIP security etc. The police force in most states are by and large susceptible to political influence, which interferes with their ability to exercise professional judgement(32). Judicial processes tend to lag, leaving courts with backlog of cases going back many years. Stretched thin by competing demands, police in India incentivise parties to seek out of court settlement. Inefficiencies in the police and judicial system may increase risk of Workplace Violence in the Healthcare sector.

3. Problem Statement

According to the Occupational Safety and Health Administration (OSHA), Health Workers suffer 50% of all assaults at the workplace in the USA(33). Health Workers all over the world are as much as 16 times more likely to experience client-perpetrated violence than other service professions(34). Nearly 70 – 80% of violence towards HW taking place globally is believed to be not reported(35). As far back as the 1980s, the problem of healthcare violence has been described in the western hemisphere. However it is only recently that Workplace Violence (WPV) is being talked about as an everyday risk of working in the health sector in developing countries(36). A survey conducted by the Indian Medical Association (IMA) suggests that as many as three out of every four doctors working in India had experienced some sort of violence from patients or caregivers/companions in the preceding 12 months. Almost 70% of these were perpetrated by those who escorted patients during hospital visits(37).

A content analysis of reports published in online editions of ten most widely read English-language newspapers in India was carried out by Arulmohi et al(38). 93 incidents were reported between first of January and 31st of December, 2017, that involved a total of 155 health professionals. Most reported stories involved incidents of violence towards doctors (81%), followed by nurses (6.5%) and other health workers (13%). Another study tracked all national and local news websites in India and found that there is a considerable increase in the number of incidents of WPV in the Healthcare sector (WPVH) incidents reported between 2006 and 2017 (Ranjan et al, 2017). Out of a total 100 incidents reported, majority of cases were in the three years from 2015 – 2016.

Violent incidents that lead to severe injuries to health workers or physical damage to hospitals often lead to strikes demanding that police act against perpetrators and that administration provide improved security (40). During the NHS strike of 2016, the general public in the U.K. was perceived as by and large sympathetic towards striking doctors (41). In India there is comparatively less support among the general public for strike action by healthcare professionals. Instead, the dominant narrative in this part of the world is that of broken social contract between the medical profession and the society that invested scarce resources in their training(42).

The courts too have taken a stringent view of striking doctors as impinging on patients' Constitutionally-guaranteed Right to Health. Strikes by doctors and nurses are seen as collective punishment meted on the society for the mistakes of a few [personal observation]. Perpetrators are often portrayed in the media and treated by the police as being under extreme and legitimate emotional distress. The reluctance on the part of the criminal justice system to act against perpetrators of WPVH is understandable, given the numerous barriers to access quality healthcare faced by a large segment of the population in India(43). The media coverage of the health sector in the country generally revolves around the theme of the high costs of healthcare that are beyond the payment capacity of most households. However, reluctance to hold perpetrators of violence against HW to account may lead to a culture of impunity towards healthcare violence in India. This would make it harder to motivate and retain HW working among underprivileged communities, making the goal of UHC harder to achieve in the country.

Governments at Central and State levels in India have responded with specific legislation aimed to tackle WPV in Healthcare sector (WPVH). As of 2017, 19 out of India's 28 states have passed such laws(44). However, in spite of stricter laws and other policy measures adopted by Government of India (GoI), violent acts directed at HWs by patients continue to be reported from all parts of the country with increasing frequency, even during the COVID-19 lockdown(45). Nevertheless, available research in India

mostly describes the distribution and risk factors of WPVH. I could not find any research that describes interventions against WPVH in the country.

A Systematic Review of the literature carried out by LanctÔt and Guay included 68 studies published between January 1985 to December 2012. The authors describe 7 categories of consequences of WPV for Health Workers: physical, psychological, emotional, work functioning, relationship with patients/ quality of care, social/ general, and financial(46)

Physical Consequences

One in twenty survivors of WPV sustain life-threatening injuries, leading to permanent disability in an estimated 2.3% of cases. A third of verbal abuse victims reported significant physical health disturbances in one study from Turkey(47). 5–32% of survivors of workplace violence meet diagnostic criteria for Post-Traumatic Stress Disorder (PTSD). Survivors report feeling helpless and humiliated, hypervigilant, having repeated flashbacks, generally feeling unwell and lacking in self-esteem following incidents of violence. There is also heightened risk somatic symptoms such as stomach pain.

Psychological Consequences

WPV is established as a predictor of depression in the healthcare workplace(48). Accumulation of negative work conditions also poses a significant risk of burnout among nurses, characterised by emotional exhaustion, depersonalization, and lack of personal accomplishment(49). A secondary data analysis of 53,846 nurses from six countries concluded that burnout symptoms in nurses is associated with lower quality and efficiency of care. This represented both a danger to service recipients as well as a cost to employers(50).

Emotional and Social Consequences

Common emotional consequences include anger, disbelief, sadness, fear, disgust, and surprise. Survivors of WPV report being less able to control anger than before(46). There is also significant adverse impact on social life and relationships.

Consequences on Job Performance

Survivors feel mistrust and fear of patients in general after the incident – not just those who were violent towards them in the past. Survivors report losing pleasure in interacting with patients, and in one study more than half (50.8%) had changed their behaviour at work as a result of the experience(51).

When physicians experience poor mental health due to severe work-related stress, they are more likely to make mistakes while taking care of patients(52). Similarly, nurses who experience incivility and bullying at work (lateral violence) might inadvertently make errors that put patients in danger(53,54).

Impact on healthcare organisations

Employees who lose trust in management's ability or willingness to protect them may disengage from work, both physically as well as psychologically. It is estimated that over 30% of nurses who experience lateral violence and bullying withdraw from certain tasks, or otherwise reduced their commitment to work. Many nurses also report spending less time at their workplace to avoid contact with a workplace bully(4).

Lack of commitment from health workers towards organizational goals has adverse impact on over-all effectiveness of care provided by a healthcare organisation. Being faced with WPV significantly increases the likelihood that an employee leaves an

organisation, if not the profession itself(55). Survivors are also significantly more likely to take leave of absence(33). Hospitals are at heightened risk of litigation from patients who are injured directly or injured due to WPV.

Consequences of WPVH on the Indian Healthcare System

Resident doctors surveyed in a tertiary care hospital in New Delhi recalled feeling angry, frustrated, fearful, irritable and sad(56). Survivors suffered from chronic fatigue and reported having feelings of low self-esteem. Many developed depression, while two had recurrent headaches. One in four survivors of non-physical violence suffer from depression and low self-esteem in the aftermath of violence. In a cross-sectional survey of 305 resident doctors in the state of Uttar Pradesh, 60.3% of 212 survivors of WPV reported that they had repeated disturbing memories, thoughts, or images of the incident(57). However, only 2.3% of the survivors had skipped work following the incident.

This research is justified because it attempts an in-depth study not only of the prevalence of WPVH in India, but also interventions against it. Workplace Violence has significant negative impact not only on the health and wellbeing of health workers, but also on the quality of care received by patients(58) Healthcare organisations have to meet additional costs from productivity losses due to staff absenteeism and decreased productivity, in addition to possible compensation claims. The community at large suffers from attrition of qualified health workers, loss of services, and costs of refurbishment of buildings and replacement of critical medical equipment etc.

The approach adopted in this thesis is helpful to bridge the knowledge gap in India, by correlating what is known in the country with evidence from all over the world. In doing so, I critically reflect on the suitability of global research for the local situation in India. I have taken a hands-on approach, using this thesis as an opportunity to reach out to stakeholders in India and elsewhere. Based on my suggestion the 'SilentNoMore' foundation (a non-profit based in the U.S.A.) has started background work on a memorial dedicated to survivors and victims of WPVH(59).

3.1. General Objective:

To explore the determinants and interventions for both type-2 (client-on-worker) and type-3 (worker-on-worker) Workplace Violence (WPV) in health facilities globally, and to suggest ways for prevention and mitigation of both type-2 and type-3 WPV in India.

3.1.1. Specific Objectives:

1. To explore the prevalence and risk factors (RF) for 'client-on-worker' and 'worker-on-worker' Workplace Violence in Health Facilities globally, with special focus on India.

2. To describe interventions adopted/suggested to prevent and mitigate risk of violence towards Health Workers globally and in India.

3. To suggest new interventions that can be adopted to prevent and mitigate risk of WPVH in India.

Doctors on strike following attack by a mob in a teaching hospital in Calcutta, that left one trainee doctor seriously injured. The Govt. of West Bengal State threatened to cancel medical licenses and arrest the striking doctors (NDTV, June 2019).

A woman waits with a baby outside deserted OPD counters at a public Hospital in New Delhi following a nationwide strike by Doctors in response to a violent attack on their colleagues in West Bengal (Sanchit Khanna/Hindustan Times, June 2019).

4. METHODS

4.1. Search Strategy

The search terms “Workplace Violence” or “Healthcare Violence” are used in combination with “Health Workers” or “Healthcare Providers” or “hospitals”, “doctors” or “nurses”. Determinants at each level of the ecological framework are matched with these terms to create a search strategy (Table-1). Full text articles available through the VU online library are accessed. For Objectives 1 and 2, the search is limited to review articles with a global focus, and original publications from India.

For Objective 3 (which describe interventions), primary peer-reviewed research from different parts of the world is included in addition to review articles. More results and Grey literature (policy briefs and taskforce reports) are accessed via Google scholar search engine. Some included results are also suggested by the VU online library while trying to access full-text articles based on systematic search. Reference lists are used to identify more results by snowballing. Some relevant results identified in this manner, and relevant task force reports, are included in study even though they are published before 2010.

Table 1: Search Strategy	Websites / Database
“Workplace violence prevention in the healthcare	

sector”	Google , VU Library
“workplace violence prevention in hospitals India”.	
(“Workplace Violence” OR “Healthcare Violence”) AND (“Health Workers” OR “Healthcare Providers” OR hospitals OR doctors OR nurses) AND (Prevention OR Mitigation OR Culture OR Politics OR Organisation OR Environment OR Economics OR “inter-personal” OR Personal)	Pubmed, CINAHL, Web of Science, Cochrane, VU Library
(“Workplace Violence” OR “Healthcare Violence”) AND (“Health Workers” OR “Healthcare Providers” OR hospitals OR doctors OR nurses) AND (Prevention OR Mitigation OR Culture OR Politics OR Organisation OR Environment OR Economics OR “inter-personal” OR Personal*) AND (“systematic review” or meta-analysis).	Pubmed, CINAHL, Web of Science, Cochrane
(“Workplace Violence” OR “Healthcare Violence”) AND (“Health Workers” OR “Healthcare Providers” OR hospitals OR doctors OR nurses) AND (Prevention OR Mitigation OR Culture OR Politics OR Organisation OR Environment OR Economics OR “inter-personal” OR Personal*) AND (India OR "South Asia").	Pubmed, CINAHL, Web of Science, Cochrane
Morphet et al 2018, Raveel & Schoenmakers 2019	Snowballing
Blackstock, Cummings and Salami 2018	
Tölli et al 2017, Nowrouzia-Kia et al 2019	
Mohammadigorji et al 2020, Ashton, Morris & Smith 2018, Pariona-Cabrera et al 2020	
OSHA 2015, LanctÔt and Guay 2014	

Table 1: Keywords and Search Engines used

4.2. Inclusion and Exclusion Criteria

Only studies that deal with WPV directed towards staff employed in a healthcare facility as the primary outcome are included in this thesis. This includes both health workers (doctors, nurses, nursing aides etc.) as well as employees in non-clinical positions (drivers, reception staff etc). Studies that describe violence towards first responders and others employed in a pre-hospital setting (such as home care workers) are not included in this thesis. This is because strategies found to be useful for preventing and mitigating occupational violence in this group may not be the same as interventions against violence in general hospital settings. English-language articles from the past ten years published in peer-reviewed journals are considered for inclusion.

For similar reasons, determinants of violence occurring in aged-care centres and that is caused by psychiatric patients (that can be explained by an underlying pathology such as clinically documented delirium or psychosis) are excluded from this Review. However, studies about interventions in psychiatry/ aged-care settings are included in so far as they have relevance to WPV in general-hospital settings. Similarly, all politically motivated violence against health workers is excluded herewith: reports about WPVH in a known conflict zone are only included if the incident is not related to ongoing armed confrontation. Finally, this thesis excludes studies that are focused on violence or

bullying faced by medical or nursing students from colleagues or supervisors, before entering the workforce (other than during clinical postings or internships).

4.3. Conceptual Framework

The University of Iowa Injury Prevention Research Center is credited with the most widely used classification of WPV in use(60). The classification system considers both the circumstances as well as the nature of relationship between employee and perpetrator of violence:

- Type-1: violence perpetrated in conjunction with a crime, without any legitimate relationship to the business or employee (e.g. robbery, shoplifting, trespassing).
- Type-2: violence perpetrated on an employee by a client. In Health Facilities, this involves patients as well as their caregivers or visitors.
- Type-3: violence between co-workers (called lateral or horizontal violence).
- Type-4: perpetrator has a personal relationship to the employee that is not related to work. For example, an estranged intimate partner who follows an employee to their workplace.

Many theoretical frameworks have been used to describe healthcare violence – as many as 24 according to one Systematic Review(61). Commonly used ones include the Haddon Matrix, the MAIM framework, the Work Organisation Framework, the Broken Windows hypothesis (originally applied in criminology) etc. These frameworks are each developed for use from a specific perspective. For instance, the MAIM framework is developed for Quality Improvement studies within nursing units.

The Conceptual Framework (CF) described by Dieleman, Syurina and Raven (unpublished)(62) explores the social determinants of WPVH. Determinants are classified into micro, meso and macro levels. As an ecological framework, it is well-suited to explore inter-linkages between these various levels. In addition, the CF enables to search for different types of WPV. Finally it links determinants to consequences of WPVH, both for individual HW as well as health system functioning (figure-2).

In this thesis I summarize research regarding the global distribution and risk factors of both Type-2 as well as Type-3 WPV in the healthcare sector, followed by assessment of evidence regarding interventions against it. Based on this I suggest ways to improve workplace safety for health workers in India. I have grouped the micro-level determinants (individual and relational levels of the framework) as one category for analytical purposes. This is keeping in line with my focus on occupational violence that involves wilful interaction between at least two parties.

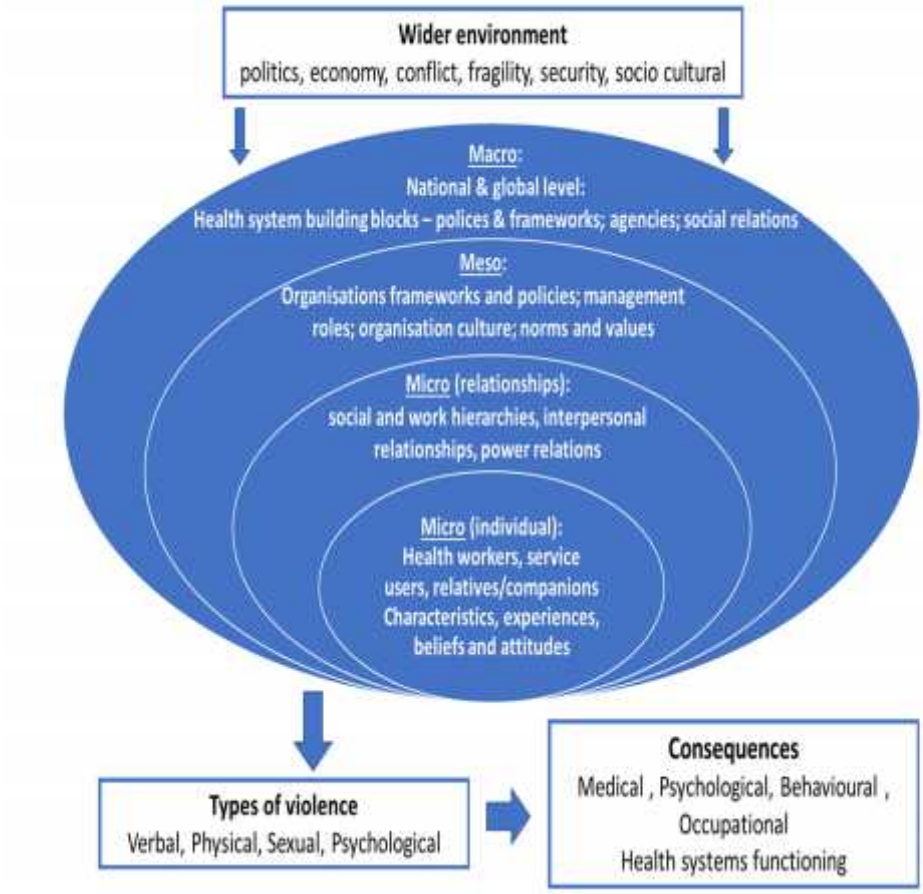

Figure 2: The ecological framework of Dieleman, Syurina and Raven (unpublished) focuses on experiences, drivers, types and consequences of WPV in Healthcare.

4.4. Ethical Considerations & Limitations

The purpose of this thesis is to find ways to enable health workers feel safer at their place of work. To achieve this I describe and make connections between risk factors related to environment, perpetrator as well as the survivor. However, focus on employee behaviour or attributes as a contributory factor to WPVH could be misinterpreted as an argument in favour of shared responsibility for violence(63). Clearly, no moral equivalence is to be made between the perpetrator and survivor, even as we study both at depth in order to understand the antecedent causes of aggression and violence in the healthcare workplace.

This paper also lacks from primary research, including interviews with health workers, their managers and other stakeholders involved in addressing WPV. Instead, it draws on published literature, formal policy documents and my own limited personal experience. This was made necessary due to time constraints as well as restrictions imposed by the COVID-19 lockdown. As mentioned already in the introduction, there is as yet no universally recognized definition as to what exactly constitutes violence, which raises challenges for cross-cultural comparison globally. This is true also within a large and diverse country such as India. Nevertheless, the thesis might hopefully serve as an introduction to more rigorous studies on effective interventions for WPVH in India.

Pictured: a tombstone in India names and accuses both hospital and doctor of negligence (source unknown).

5. RESULTS

5.1. Distribution of Workplace Violence

5.1.1. Global prevalence of Healthcare Violence

Five Systematic Review (SR) articles describe the global prevalence of different kinds of WPVH. One recently published Systematic Review and Meta-Analysis (SR&MA) describes the global prevalence of occupational violence against healthcare workers. The review, which analysed 331,544 participants from 253 studies, estimates that 61.9% of the global health workforce are exposed to some form of healthcare violence annually(64). Non-physical violence (42.5%) is more commonly reported than physical violence (24.4%). Nurses are affected more commonly than doctors.

Verbal abuse, followed by threats and sexual harassment are the most commonly reported forms of non-physical violence. Highest number of reported incidents are from Australasia(71%), followed by North America (67.3%), Asia (64.9%) and Africa (59.2%). Emergency Department (ED) is the most common site of verbal violence, whereas physical violence happens most often in psychiatry hospitals. Maternity wards and Critical Care Units are other high risk settings(65).

This is in agreement with the findings of Nikathil et al, who carried out a SR&MA of 22 studies on violence in Emergency Departments worldwide. 12 studies are from the U.S., followed by Europe and Australia with four studies each(66). Only study is from LMIC setting (South Africa). The studies report a wide range of estimates for prevalence, from 1/10,000 to 172/10,000 patient encounters. A pooled prevalence of 36 violent incidents is estimated for every 10,000 patient presentations in EDs globally.

Another SR&MA by Nowrouzi-Kia et al describes occupational violence directed towards doctors, both from clients as well as colleagues(52). This study estimates a global prevalence of 69% for both type-2 and type-3 WPV against doctors in a 12-month period. According to WHO estimates, between 8% and 38% of healthcare workers worldwide experience physical violence at least once over the course of their careers(67). Up to a quarter of nursing staff worldwide are estimated to be subjected at work to behaviour that can be considered as bullying(4).

A quantitative Review on nurse exposure to violence was published by Spector, Zhou and Che in 2014. This study compiled 136 articles, that together provide data on a total of 151,347 nurses from 160 samples(68). Over-all global exposure rates of 36.4% and 66.9% are estimated for physical and non-physical violence respectively. Further, 39.7% nurses reported bullying at work, and 32.7% were physically injured in an assault. One in four nurses are exposed to sexual harassment at work.

Highest rates of physical violence and sexual harassment are reported in the Anglo region (English-speaking countries of North America, the U.K, and Australia). Most verbal abuse and sexual harassment is reported in the Middle East. Consistent with the study from Liu et al, ED is the most common site of physical assault, followed by geriatric and psychiatric care facilities. Kaysay et al found a wide range for estimated prevalence of sexual harassment directed at nurses in their Systematic Review of 20 articles. The included studies reported prevalence rates as low as 10%, to a high of 87.3%. The pooled prevalence of 43.2% is higher than the estimate of Spector et al(25%).

Global prevalence of healthcare violence is widely under-estimated(68). One reason why this happens is that there is no clear and universally accepted definition of what constitutes violence. Even in countries with relatively well managed health systems, when an incident is reported, the severity of violence tends to be understated in

official statistics. The report on 'Occupational Violence Against Healthcare Workers' published by the Auditor General of the State of Victoria (Australia), notes that "incidents routinely categorised as 'mild', 'near miss' or 'no harm' included attempted strangulation, kicking a pregnant woman in the stomach, sexually inappropriate conduct, and being kicked and punched"(19:p.xi). It is therefore important to investigate so-called 'near miss' incidents as precursors to major violence(33).

5.1.2. WPVH Prevalence in India

There is a paucity of well-structured studies that estimate prevalence of WPVH in the Indian healthcare sector, and although the evidence base is slowly emerging, the methodological quality of studies is generally poor. A cross-sectional study of 151 doctors working in a tertiary care hospital in New Delhi found that nearly half (47%) of the doctors had experienced all-cause WPV in past 12 months(69). More women than men reported facing WPV in this study (44.6% of males and 50.8% of females). There is under-reporting of WPV in India as well, only 22 out of 136 violent incidents (23.5%) in one study being reported to the concerned authority(70).

Another cross-sectional study surveyed 394 health workers of all categories (doctors, nurses and other support cadre) employed at an academic medical centre. 136 workers (34.5%) reported experiencing WPV in the previous 12 months(70). Most violent incidents were directed towards nurses (41.4%), followed by doctors (24.6%), and least towards others in the support cadre (10.4%). 69 out of 169 resident doctors surveyed via a self-administered questionnaire at a tertiary care hospital in Delhi report being exposed to violence at their workplace in the past 12 months(56). The ED remains the most at risk of WPV in all these studies.

In a cross-sectional study of 305 resident doctors at three training hospitals in the Northern state of Uttar Pradesh, almost 70% reported facing some form of WPV in the previous 12 months(57). Out of the 212 study participants who survived WPV, most (70%) report being exposed to verbal abuse. Nearly half (47.2%) had experienced physical violence, sometimes involving use of sticks, knives, and furniture as weapons. These findings are in accordance with a cross-sectional survey of 230 resident doctors at a teaching hospital in the state of Manipur(71). Almost 80% of respondents (78.26%) reported facing some form of WPV over a six month period in 2011. Companions of patients were the perpetrators in nearly 70% of the cases.

There is no authoritative source that describes prevalence of WPVH within different parts of India. Ranjan et al conducted a descriptive analysis of reports regarding violence and vandalism against doctors/ health facilities reported in online editions of all national and local newspapers between January 2006 and May 2017(39). Over all, more reported incidents of violence are from the North and West of the Country, as compared to the South and the East. New Delhi, followed by the State of Maharashtra in the West, accounted for most number of incidents reported in online news websites. This study may have been biased since online news media in India has most readership in the large cities. New Delhi and Mumbai being the two largest cities in India, news concerning incidents in and around these cities are likely to be disproportionately reported in these websites.

5.2. Determinants of WPVH

5.2.1. Micro-level Determinants

Micro-level determinants include both characteristics of individual health workers and clients, as well as the quality of relations between them. Three SR&MA articles and their included original studies are described in this segment, in addition to articles from India.

Patient-related factors

The SR&MA by Nikathil et al found that men aged 26 to 42 years are most likely to be perpetrators in violent incidents within ED. The risk peaks around the age of 40, with more patients than visitors being implicated by health workers. Among women, who are over-all less likely to behave aggressively towards health workers in the ED than men, the median age of being a perpetrator is 28. Patients who are intoxicated are far more likely to be perpetrators than others. Persons under influence of alcohol are responsible for almost half of all violent incidents in EDs (global pooled estimate 45%).

These results are in agreement with Nowrouzi-Kia et al(52). Patients over the age of 65, those who were under mental stress or in an altered state of mind, highly anxious people, those with behavioural issues or under the influence of alcohol or drugs are all more likely to be perpetrate WPV. In addition, certain beliefs and attitudes of service users are found to be associated with higher risk of violence and aggression towards health workers in some of the studies examined in this Review. Individuals harbouring notions of poor quality care, and an attitude of blaming doctors as scapegoat for poor outcomes, are more likely to be associated with violent incidents.

Employee-related factors

Edward and colleagues synthesized 14 studies that study factors related to violence and aggression against nurses perpetrated by both patients/ relatives as well as other staff globally(72). Female nurses have 50% greater odds of facing verbal abuse than males, however men have 18% higher odds than women of encountering physical violence. Younger and less experienced staff are at higher risk for both physical and verbal violence(73). Reported incidents of WPV in the English-speaking parts of the world is perpetrated mostly by patients, whereas in the Middle East it is relatives or companions of patients(68).

Quality of relationships as a determinant of WPV

Social and work hierarchies, interpersonal relationships and power relationships at the workplace increase the risk of WPV, both between patients and health workers as well as among employees. Miscommunication between patients and staff commonly underlies incidents of type-2 WPVH(72). Wilson points out the role of nursing mentors in bullying students and newly qualified nurses, thereby socializing them into a culture where they themselves feel expected to be bullies towards their colleagues(4). Such ‘socialization’ often begins early in a student nurse’s training, from fellow students and teachers at the university.

Micro-level determinants of WPV in India

In India, a content analysis of online newspapers found that almost three quarters of 93 incidents of violence against doctors reported in press in the year 2017 were perpetrated by relatives and visitors of patients. 70% of these were men(38). Another study of online news reports from 2006 – 2013 found 100 reports of major vandalism in hospitals

(including physical violence/ destruction of property and led to strikes). 73 out of these were directed against male doctors/ health workers(39).

Consistent with evidence from other parts of the world, younger doctors and those with less work experience are at higher risk of experiencing WPV(69). Almost 70% of violent incidents faced by resident doctors surveyed in three training hospitals in North India were perpetrated by relatives and attendants of patients(57). Doctors undergoing compulsory internship were determined to be at highest risk of experiencing WPV in this study. Poor quality of communication from doctors is cited as a cause of violence by patients interviewed in another study from South India(30). Being under the influence of alcohol is shown as a risk factor among perpetrators in this study.

5.2.2. Meso level determinants

These refer to such aspects as organisational frameworks, management roles and policies etc. as well as organisational culture, with its norms and values that inform day-to-day functioning of the health system. Organizational and Environmental factors related to physical maintenance of facilities and human resource management have been explored at depth in two SR articles. A third SR examines the role of organisational culture. These Reviews and therewith included original research articles are examined in this segment.

Organizational Determinants of WPV

Nowrouzi-Kia et al studied the risk factors for different types of WPV faced by nurses in a second SR(74). Studies described in this review point out that under-resourced and under-trained staff are at higher risk of abusive behaviour from patients, due to poorer quality of care. High workload, lack of training on how to handle WPV, lack of visible security, fear of management etc are identified as common antecedents of WPV. Long waiting times and discrepancy between patients' expectations and (perceived) quality of services are frequently cited as a RF of type-ii WPV(58).

Working in the afternoon and evening shifts, working alone, lack of management support and fear of consequences while reporting workplace injuries are all found to be positively linked to risk of WPV in a cross-sectional survey of 240 physicians and nurses working in Palestinian hospitals(75). Lack of job control, characterised by monotonous work, and absent opportunities to learn and improve on skills, was found to lead to increased aggression and bullying behaviour among a sample of 1515 Finnish doctors who participated in a longitudinal survey between 2006 and 2010(76). These studies echo the finding by Liu et al that lower number of healthcare workers in employment and low per capita government spending on health leads to heavier workloads for doctors and nurses in many countries across Asia, exposing them to higher risk of WPV(64).

The recent SR by Pariona-Cabrera, Cavanagh and Bartram synthesized research on WPV against nurses, and examined the role played by Human Resource Management (HRM) departments of healthcare organisations in managing and mitigating workplace violence. 71 articles that met the inclusion criteria (government reports and refereed articles published between 2004 – 2019) were included in the study(77). The researchers concluded that HRM primarily served as a facilitator of the administration, and was fundamentally concerned with ensuring compliance from employees. Not enough was being done to methodically mitigate and manage the risk of WPV, or to support survivors of violent incidents. This is despite increasing realisation of the challenges faced by the caring professions and the need to support them for the wellbeing of society at large(78,79). Environment risk management, including increasing visibility and consumer risk assessment, have important influence on the level of safety in hospitals as perceived by health workers(80).

Role of Organisational Culture

Top-down management structure, and a culture that is accepting of bullying, leads to a self-perpetrating cycle of lateral violence in nursing(81). An integrative review by Blackstock, Salami and Cummings explored organizational antecedents of lateral violence among nurses, focusing on the role of policy initiatives to counter it(82). The importance of clear organisational policy against nurse-to-nurse (horizontal) bullying and violence is raised by many of the 22 studies included in this review.

According to a study conducted among 298 hospital nurses in Busan, South Korea, hierarchy-oriented organisational culture is the most prevalent in healthcare organisations (45.5%). Relation-oriented culture is the next common, at 36%. Innovation and task-oriented work cultures have lower prevalence rates, of 10.4% and 8.1% respectively. Nurses working in organisations with hierarchy-oriented culture have a 2.58 times odds of facing bullying compared to those who worked in organisations with relation-oriented cultures(83). Denial of participation to nursing leaders in scheduling or ordering of work, setting organisational priorities, deciding nurse-to-patient workloads or nursing roles is a common feature of the organisations with hierarchy-oriented culture(82).

Croft and Cash, using a post-colonial feminist approach, found that bullying and lateral violence is deeply institutionalised within the culture of many health care organisations, and is often directed towards nurses(84). Taken-for-granted hegemonies in the workplace enable decisions that are made at hierarchical levels, to affect day-to-day functioning of nursing departments. Staff mix changes and increased workloads – often in response to funding shortfalls – increase the risk of WPV faced by nurses. Informal organisational alliances (cliques) among staff, and social networks in which bullying intensifies and spreads, are strongly correlated with violence and bullying(85). Nevertheless, it should be remembered that lateral violence among nurses and other healthcare professions is a learned behaviour: a majority of 128 nurses surveyed in one study in the USA affirmed the value of teamwork in providing quality patient care (86).

Meso-level determinants of WPVH in India

The study by Kumar et al in a South Delhi hospital found that most violent incidents occurred during afternoon and evening shifts(87). Ranjan et al also found that HWs working the night shift are more likely to have grievous injuries as a result of WPV(39). Fewer staff are available during these hours and they are also more likely to be younger, less trained and working alone as compared to those working during regular hours.

Most violent incidents were reported from the ED, followed by Obstetrics and Gynaecology department (ObG). Survivors were discouraged in many cases from making a report and pursuing the incident, to not hurt the prestige of the institution, in the interest of academics, or simply to not waste time. Most survivors of WPV in the study by Kumar et al remain highly dissatisfied with the way their complaints were handled by the authorities.

These findings are echoed by the results of a cross-sectional survey by Singh et al(57). 65% percent of 212 resident doctors who had faced violent incidents in the previous 12 months believed that type-2 WPV in three training hospitals in North India could be prevented. 85% remain dissatisfied with the way the incident was handled. No action was taken immediately in regard to violence in most cases, no perpetrator was prosecuted in any incident.

The most commonly cited causes of violence in this study were related to poor health system management. These included non-availability of medicines, inadequate staffing, absent security, as well as lack of sufficient and timely communication. Poor communication and delay in delivering care have been recognized as risk factors of WPV

in another study as well, that surveyed 112 health care providers in addition to interviews with 54 members of the general public(30).

5.2.3. Macro-level Determinants of WPVH

This analytical category includes factors operating at the national and global level that have a bearing on the risk of WPV towards healthcare workers. The report of the occupational violence prevention in Queensland Hospital and Health Services taskforce comments on the increasing prevalence of anti-social behaviour in society (including alcohol- and drug-fuelled violence). Traditional taboos that may have protected those engaged in the 'caring professions' in the past from threats or violence have been weakened in recent years, notes the Report(2).

Reduced respect for authority as a RF is also cited as a RF in some studies reviewed by Raveel and Schoenmakers. Other societal causes mentioned include language and cultural barriers between health workers and clients, poverty and social dislocation, high density of population as well as the so-called 'Bowling for Columbine effect': a spiral of fearfulness and suspicion between health workers and clients, that leads to pre-emptive defensiveness and confrontation and ultimately heightens the risk of WPV.

WPVH and the Criminal Justice system

Multiple authorities have cited the importance of the health system and the criminal justice system to work closer together(1,2). A report submitted to the Parliament of Victoria calls for police liaison officials to be identified for this purpose(88). The Queensland Health Taskforce Report on Occupational Violence prevention calls for formal protocols and procedures for exchange of information and support between the healthcare and judicial/police systems, including information on prior history of violence towards health workers(2).

An enquiry done by Medicos Legal Action Group under India's Right-to-Information laws revealed that in case of WPVH, few complaints ever reached the police. Of these, most tended to end in an informal compromise(89). In most cases this was done without filing a First Information Report (FIR) by the police (a pre-requisite for further legal action). Even after an FIR was lodged, more cases ended in compromise rather criminal prosecution.

This is in large part due to the practice of lodging two FIRs, one from each side alleging violence by the other. This would ordinarily be followed by years of litigation in courts, with attendant costs and inconvenience. This forces the opposing parties to seek out of court compromise and withdrawal of both FIRs by mutual consent . In the states of Punjab and Haryana, no alleged perpetrator of WPVH had been punished under the state's anti-violence legislation between 2010-2015(89). Many incidents of violence are perpetrated with active involvement or support of political leaders. In some incidents, police officials are themselves the perpetrators(57).

Gender and WPVH

7 out of 10 people employed in the global health and social sector - a workforce numbering upwards of 234 million – are women. However, men occupy three quarters of senior roles that involve executive authority(90). In the nursing profession, presence of women range from 86% in the Americas to 65% in Africa. Together, women contribute over USD 3 trillion to global health annually, half of it in the form of unpaid care work. The fact that women have continued to be concentrated in low-paid and low status jobs within the health sector, makes them more vulnerable to WPVH(5).

Lack of job control, and opportunities to learn new skills and to perform a variety of tasks, have been recognized as antecedent risk factors of aggression and bullying in the nursing profession(82). Many hospital managements routinely overlook sexual harassment faced by female nurses. Especially when perpetrated by accomplished physicians, complaints are ignored even when they are reported (91). A Thompson Reuters foundation survey named India as the Number One most dangerous country for Women worldwide in 2018 (92). The tragic case of Aruna Shanbaug, while extreme, is unlikely to be exceptional in India.

Growth of Corporate Sector in Health

The role of neo-liberal political and economic structures in propagating systems of oppression and violence within the health system has been described by Croft and Cash(84). This is accompanied by shift in patterns of training and employment of doctors, towards the private corporate sector and away from the public sector and doctor-owned hospitals. Such changes in employment relations are associated with artificially imposed performance targets irrespective of patient needs in many cases. These in turn lead to overtreatment and over-prescription, which results in cost inflation.

Doctors in the early part of their career in India are particularly vulnerable to pressure from hospital managements, in part due to rising costs of medical training as well as dwindling opportunities for satisfactory employment either with the govt or in smaller private facilities(23). The resultant distrust in doctor-patient relationships leads to suspicion of ulterior motives on the part of doctors even for advice given in good faith. When treatment does not lead to desired outcomes, doctors are faced with both medical malpractice suits as well as heightened risk of WPV towards health facilities.

Other macro-level risk factors of WPVH

Availability of medicines, vaccines and essential medical equipment remains challenging in the public health system in the country. In the cross-sectional survey by Singh et al of 305 resident doctors in North India, non-availability of medicines, (38.6%) closely followed by inadequate staffing (36.7%) were cited as top reasons that led to violence(57). There are also concerns raised regarding the quality of drugs available in the private sector, especially in smaller hospitals outside of major hospitals(93). Spurious or substandard drugs are likely to lead to poor treatment outcomes, which are a known risk factor for WPVH.

The poorly regulated medical diagnostics industry is perceived to be engaged in corrupt practices, soliciting referrals from doctors for patients who have no need of expensive investigations. Concerns of such ‘supplier-induced demand’ are high in India given the imbalance in knowledge and power between doctors and the general public in India(94). It is likely to heighten the risk of WPV if and when patients and the general public do not believe that doctors and healthcare organisations do not act in good faith and with their best interests at heart; more so in the event of death or disclosure of critical condition(30).

The International Council of Nurses (ICN) has summarized the common antecedents of healthcare violence in a thematic diagram released as part of their Guidelines on Coping with Violence in the Workplace(1). The report notes that an interplay of factors converge in each incident of violence, and emphasises the importance of clear policy statements from health worker’s national representative bodies/ associations (figure 3).

Figure 3: Determinants of WPVH. From International Council of Nurses (2007). Guidelines on Coping with Violence in the Workplace: p.18

NNA = National Nursing Association

5.3. Strategies against WPVH

The 'Framework Guidelines for Addressing Workplace Violence in the Health Sector' from WHO and ILO calls for participative and integrative approaches to both prevention as well as mitigation of WPV in the healthcare sector(5). A structured approach is suggested, to be articulated in a series of fundamental steps including violence recognition, risk assessment and intervention, all followed by monitoring and evaluation.

Integrated violence-prevention programs that incorporate elements from more than one category of interventions are preferable (58). Interventions encompass four broad themes: changes to organizational practices, environmental modifications, staff training programs as well as post-incident support. Studies that address each of these themes are described in this segment (Table 3).

5.3.1. Organizational interventions

A well-publicised "Zero Tolerance" policy is a common starting point at the administrative level across multiple interventions described in the scoping review by Morphet et al(80). This should be operationalised in practice by investing time and resources to make improvements in the physical environment as well as to work organisation. Risk Assessment happens at multiple levels and on an ongoing basis. Organisations, situations and individuals (perpetrators/ survivors) at higher risk of violence are identified based on known risk factors (remote location, late shift, working alone etc.).

Simultaneous occurrence of multiple risk factors make a situation more prone to violence and should prompt preventive action by managers. Structured worksite walkthrough is shown to be an effective and participatory approach for worksite analysis and hazard identification(33). This includes job hazard analysis and tracking of Records, along with surveys of both employees as well as patients/clients(95).

As pointed out in an earlier section, recognizing violence as a problem requires a human-centric workplace culture. Participatory organisational processes facilitate joint risk assessment with those working on the frontlines. Kling et al describe an 'Alert System', whereby any one of the following three immediately raised an alert against a patient: history of violent behaviour in the past, physically aggressive or threatening behaviour, verbal hostility. In addition, three or more of the following behaviours raise a flag as well: shouting or demanding, displaying signs of drug or alcohol intoxication, hallucinations, threatening to leave, confused, suspicious, withdrawn, or agitated(96). Even though the Alert Flag is a good predictor of violence the act of screening could itself possibly trigger aggression, thus leading many health workers to use them sparingly(97).

Institutional strategies to prevent both type-2 as well as type-3 WPV in nursing work are summarized in a recent Systematic Review by Brazilian researchers(98). One such initiative, the 'BE NICE' program was borne out of an institutional policy to restore a healthy nursing work environment at a U.S. academic medical centre. The 'Bergen Model', in use in Sweden since 2006, encourages participants to reflect upon their own attitudes and approach to challenges in the workplace, and how this affects the unit culture as well as the organization at large. The model, initially developed among psychiatry care settings in Norway, aims to develop good team-patient relations(99). Patients who perceive being ignored or neglected by staff – such as by not being processed in the order of their arrival – are at heightened risk of perpetrating violence towards health workers(100). Posting additional staff during busy hours as well as timely

and adequate sharing of information (such as by courtesy messages for delay) are both shown to reduce risk of WPV(101).

5.3.2. Environmental improvements

Risk assessment ideally goes hand in hand with risk control measures. These include changes to the physical environment as well as investments for training and equipping staff to avoid violence and to recognize and better respond to violent incidents. One recent SR applies the 'Crime Prevention Through Environmental Design' (CPTED) to investigate the impact of healthcare environmental design on staff security(102). 15 studies published globally between 1991 to 2017 are evaluated, and findings organized according to following categories: natural surveillance, access control, territoriality, and other CPTED elements. Natural Surveillance refers to interventions that lead to improved visibility of health workers. Employees felt safer when they were more likely to be seen by others, especially security officers(100). Visibility is improved by open layout with fewer walls, use of Closed Circuit Television (CCTV) or transparent glass doors (replacing solid doors) etc.

Access control, including use of automatic doors, helps to ensure that only persons with legitimate reason are present at any given time(103). Strategically placed emergency exits help ensure safety of staff and patients in case of a major incident. Safe Assessment Rooms (SAR) in the ED help to rapidly isolate and manage patients with suspected brain damage, under the influence of alcohol or drugs, or otherwise presenting an active risk to safety of health workers while maintaining the therapeutic relationship. A quiet area helps the agitated person to calm down, while also preventing further disturbance in the ED and helping to keep other patients safe.

Spatial modifications that lead to improved visibility and processes that reduce access to (potential) weapons are found to be effective in some interventional studies reviewed by Morphet et al. Weapons control strategies include measures aimed at detection of firearms and other concealed weapons as well as properly securing furniture, IV poles etc that may be used in event of an attack.

Territoriality refers to strategies that enable employees and clients to feel in charge within their respective designated areas. Whereas surveillance helps improve visibility in hospitals, constant surveillance of patients (such as in ED via CCTV) may also heighten risk of violence if it is seen as too intrusive(104). Adequate lighting, temperature and noise control, separate waiting rooms for patients after triage, access to nutrition etc are grouped under other CPTED elements that may reduce risk of WPVH(105–107).

5.3.3. Individual-level interventions

A quantitative Systematic Review by Tölli et al evaluates the effect of training interventions on enhancing the ability of nursing staff to manage challenging behaviour from patients(108). 16 interventions are studied, and classified into four key themes: disengagements, communication, controlling behavioural symptoms and restrictive measures.

Of these, interventions belonging to the 'Communication' category were found to be the most effective at managing WPVH(109,110). Most training was delivered via classroom teaching, except one intervention which had an added e-learning component(110). Training in behavioural control and restrictive measures are mostly included in

psychiatric units. Only one intervention describes physical breakaway skills for nurses (in neuroscience)(111).

Tölli et al found that nurses who attended training programs had improved confidence levels regarding their ability to manage challenging patient behaviour. However they were less likely to improve their knowledge base or attitudes. These findings partially match with the conclusions of another review article on impact of training programs, which found improvement in both confidence and knowledge but not attitude as a result of attending a short training program(112). Eight out of twelve studies included in that review helped attendees to detect early signs of violence. Communication training was included in nine studies, whereas three interventions also had a session on responsibility of health workers. One training intervention from Pakistan found that training improved confidence of HW at ED and ObG departments of two hospitals in Karachi to deal with incidents of WPV. No research was found from India describing any intervention against WPV in health facilities.

5.3.4. Post-Incident Response

These include responses during an ongoing incident as well as in the aftermath of violence. Based on research done within psychiatry settings, verbal de-escalation is the first choice intervention during a violent incident, after ruling out any underlying organic basis(113). Non-coercive de-escalation involves a three-step approach comprising of verbal engagement, establishing a collaborative relationship with the perpetrator, followed by de-escalation. It can be achieved in as little as under five minutes(114). Multiple studies indicate that risk of violence reduces following staff education in recognising ‘at risk’ behaviours, communication and de-escalation(115–117).

De-escalation is a skilled activity, ideally managed by inter-disciplinary Aggression Management Teams (AMT), otherwise known as “Code Grey” response(118). An inter-disciplinary clinical approach that focuses both on security as well as on continued patient care is found to be effective in the study by Lakatos et al(119). In incidents of lateral violence, a so-called ‘4S’ strategy has been carried out as a way to address bullying without directly confronting the aggressor. Four key aspects of this strategy are ‘Stand-by’, ‘Support’, ‘Speak-up’, and ‘Sequester’(120).

In the immediate aftermath of violence, survivors should be supported comprehensively. This includes not only help for visible injuries/ physical symptoms but also support that is directed towards meeting long term mental and emotional health needs of survivors. There is some evidence that even with adequate support long-term effects on job neglect and fear of violence in future cannot be undone, so prevention is key(121).

Root Cause analysis of each incident of WPV with participation of workers is mandated(33). Structured reflections upon the incident, both as individuals and at group level helps to identify systemic weaknesses as well as potential solutions and action plans for future incidents(58). Trauma-informed services are sensitive that survivors need service delivery approaches that support vulnerabilities or triggers of trauma, thereby avoiding re-traumatization(33).

The first priority in developing a workplace violence prevention policy is to establish a system for documenting violent incidents in the workplace(122) One recent paper from India has suggested a grading system for severity of violence(123). The researchers recognize ‘Verbal violence’ as a form of WPV. They propose a grading system from minor verbal conflict (Grade-1), through to severe violence that results in death or permanent functional disability (Grade-5). A standardized grading system is a valuable addition to

routine incident reporting, and could potentially lead to proportional but effective responses (Table 2).

Grade	Description
I	Patient and/or attendant led minor conflict: unwanted argument, shouting, obscene gestures, and emotional blackmailing. Impacts psychological well being of the doctors and hampers daily routine.
II	Severe form of verbal abuse (use of abusive words, death threats, passing offensive comments) in person or over telephonic call.
III	Physical assault (pushing, kicking/beating, using objects such as knives or guns, slapping, strangling, pulling hair, etc) causing moral and psychological distress but no physical injury.
IV	Physical assault causing severe grievous injuries such as visual disability, hearing disability, dislocation of face, fracture etc., and psychological distress.
V	Most severe form of physical violence, which results in the death or permanent functional disability. Negatively affects the morale of the doctors and might lead to mass protest against administration.

Table 2: Grading System for WPV. From Kumari A et al, 2020.

Table 3: Summary of articles describing interventions against WPVH

S No	Study Name	Details of Intervention studied/ found effective			
		Organizational	**Environmental**	**Training**	**Intra and Post-incident support**
1.	(Morphet *et al.*, 2018)*	Consumer Risk Assessment (CRA)	Increase visibility, Access to weapons, Safe Assessment Rooms	Recognizing, communication, De-escalation	Aggression management team, Group debriefing
2.	(Mohammadi Gorji *et al.*, 2020)*	CPTED principle	Visible to security, Access control, Territoriality		
3.	(Pereira *et al.*, 2019)*	Bullying Task Force, Bergen Model (team-patient relations)		Identifying, Interpersonal skills, De-escalation	Stand-by/ Support/ Speak up/ Sequester (4S Strategy)
4.	(Raveel and Schoenmakers, 2019)*	"Zero tolerance", adequate staffing during busy hours, courtesy message system, CRA	Lighting, exit routes, barriers, door locks, CCTV, panic buttons, comfortable wait rooms, safe storage of drugs and money	Recognize verbal violence as a RF of physical, de-escalation and communication	root cause analysis.
5.	(Safwan and Ariffin, 2019)*			HW knowledge and confidence improved but not attitude.	
6.	(Tölli *et al.*, 2017)*			HW confidence improved but not attitude or knowledge.	
7.	(Hamblin *et al.*, 2017)	Worksite walkthrough			
8.	(Pati, Pati and Harvey, 2016)		Physical design to improve visibility and manage patient traffic		
9.	(Perkins *et al.*, 2017)*		Personal Security Alarms		
10.	(Richmond *et al.*, 2012a)				Verbally de-escalate with therapeutic relation
11.	(Baig *et al.*, 2018)			De-escalation training gave more confidence	
12.	(Lakatos *et al.*, 2019)	Inter-disciplinary clinical approach "S.A.F.E."			Spot, Assess, Formulate plan, Evaluate Outcome

* Review Articles

The aftermath of violence: Relatives vandalise a state-run teaching hospital outside Kolkata following death of a patient - screenshot from ANI News Service, May 2020

7. DISCUSSION

Workplace violence may manifest in different ways, and is often hard to notice. Aggression and bullying is an accepted part of the organisational culture at many healthcare workplaces around the world(84). Nearly 70% of the global health workforce experiences some form of WPV every year(64). Emergency Departments, maternity wards and critical care units are at high risk in general hospital settings, both in India as well as at the global level.

Employees who are younger, less well-trained, working alone or after regular hours, or posted at remote areas etc. are at higher risk. Women are more likely to face verbal violence, whereas men have higher risk of physical violence. Long-wait times, poor perceived quality of care, non-availability of medicines etc. are all linked to incidence of WPV. Hierarchy-oriented organisational culture has highest prevalence of WPV, followed by organisations that are oriented to relations, innovation and task performance, in that order.

Lack of support from the management and fear of victimisation prevent employees from reporting violence perpetrated by clients or colleagues. This in turn reinforces an organizational culture that tolerates, if not actively encourages, aggression and intimidation. WPV affects women disproportionately, who are over-represented in lower-paid positions within the healthcare sector. Ability or willingness of organisations to ensure adequate protection of workers is in turn influenced by determinants acting at broader societal level, as well as the quality of health system management in the country Interventions against WPVH are classified as organisational, environmental, training and post-incident support.

Even though research shows that aggression and bullying are widespread and even normalized within the culture of many healthcare organisations, most research from India has studied the impact of type-2 WPV on doctors. This may point to the need to develop capacity among nursing departments to conduct their own research and generate evidence. However, it could also be a reflection of hierarchy-oriented culture that raises challenges to reporting against one's social superiors. An obsession with social distance serves to compartmentalise the nursing and the medical professions into groups that seldom work together, and are often opposed to each other [personal reflection].

Evidence suggests that effective interventions against WPVH need to be comprehensive, involving more than any one of the above-mentioned four components individually. However, most organisational strategies revolve around providing communication training to staff for verbal de-escalation, as a stand-alone measure. Training, while necessary, is not likely to by itself give the desired long term impact. Over-reliance on Human Resource Management departments might even be counter-productive to the ideal of a participative process that empowers frontline workers(108,112,124). It might also lead to a situation where workers are given a short training and held responsible for preventing and managing WPV.

Training programs routinely equip workers to detect early warning signs of WPV. These are generally behaviours that mark aggression or incivility. Whereas it is necessary to both identify impending violence as well as to take steps towards de-escalation, care should be taken to avoid rewarding incivility/aggression on a routine basis. At the same time, it is important to recognize that training is often the only intervention that can be carried out in the near term. Training, combined with administrative measures such as improved security and physical modifications, give best results(125). The responsibility for preventing and managing WPV ultimately rests with those in leadership positions, and not with frontline workers(77).

Epistemological challenge of WPVH

One reason for underreporting of healthcare violence is the lack of consistent definitions as to what constitutes an actionable threshold of violence. 'Zero Tolerance' policies are good, but the real challenge is in clearly answering the question, "Zero tolerance to what?". it is important that there is a broad agreement among health workers on the one hand, and between HW and management, on this question. This consensus should also be clearly communicated to the government and general public and reflect in the way incidents are handled.

One surprising finding was that verbal violence had even more long-term adverse impact on survivors than physical violence. Similarly, those who witness violence at work report being adversely affected, even when it was not directed at them personally(57). It is important to recognize verbal abuse as a form of violence on its own right, and not simply as a risk factor for more severe forms of violence. A recently proposed grading system for WPV is useful for this purpose(126).

WPVH and Health Systems

Many determinants of WPVH identified in this thesis have their roots in the quality of health system management at the national level. All the WHO Health System Building Blocks are involved in one way or the other with factors that increase risk of WPVH. Inadequate public health service delivery manifests in the form of ill-maintained, overcrowded hospitals with long waiting lines and poor appointments management system. Unskilled staff are not only prone to make mistakes, but also likely to lack adequate communication skills. Poor treatment outcomes combined with insensitive style of communication is frequently cited as a trigger of WPVH in India. So also is not having ready access to drugs and diagnostic equipment, especially in the public healthcare sector in the country.

Excessive secrecy with respect to sharing health records, as well as failure to protect and safely store medical information, both contribute to a spiral of mutual suspicion and confrontation between health workers and clients [personal observation]. Lack of adequate financial risk coverage makes private healthcare inaccessible to a large segment of Indians. Catastrophic health expenditure leading to impoverishment is not only an immediate trigger of violence, but also helps perpetuate negative stereotypes regarding the health care sector in the society at large. Finally, the role of leadership and governance has been well-recognised as central to the success of any intervention against WPVH.

The fear of WPVH might also affect the way HWs take decisions related to patient care. Doctors and nurses make professional judgements on behalf of their patients on an almost daily basis. Fear of verbal and physical abuse for perceived poor quality of care might lead them to 'play safe', leaning towards more intensive care (such as expensive investigations, surgeries or critical care). Not only does this increase costs, but it is also leads to poorer Quality of Life for patients.

WPVH raises ethical dilemmas

Right to Health is an essential human right, protected by national and international law. In India, Health has been given the status of a justiciable Fundamental Right. Healthcare profession is built around the premise of serving the sick, and most health professionals readily forgive violence that they can explain as being medically caused. However, this reluctance on the part of HW to hold perpetrators to account has now morphed into a situation that undermines the very functioning of health systems.

Nevertheless, a security-first approach to addressing healthcare violence is not only ineffective but is also possibly counter-productive(122). Indeed, no 'high risk' individual is a security risk at all times(58). A risk-management approach tailored to the needs of each hospital and putting the safety and wellbeing of patients first is advisable. Tolerating and accommodating WPV is a bigger threat to the right of the average citizen to access good quality healthcare, than any potential miscarriage of justice that may accrue from identifying and proportionally responding to habitual offenders.

Strengths and Limitations

Through this study, the complex interlinkages between the determinants of WPVH acting at different levels have been brought to the surface in a systematic manner. WPVH is by and large seen by the general public, policy makers as well as healthcare organisations as a problem of individual health workers. By uncovering the impact of WPV not only on the effectiveness of healthcare organisations but on the functioning of health systems, the problem might get the attention it deserves in health policy making in India

The CF of Dieleman, Sayurina and Raven was helpful, both in searching for and organising results in a systematic manner. The Search Strategy was made by combining the terms "Workplace Violence" and "Health Workers" with various determinants mentioned in the CF. As an ecological framework, it made exploring inter-linkages between determinants at various levels logical and easy. However, the CF has a broad focus on social determinants, and is less focused on the 'spiral of interactions' that lead to violence. In future research, the CF may be adapted or combined with another CF that is more oriented towards the dynamics of micro-level interactions.

The study has not been able to identify much research on interventions against WPVH from LMIC background. Most of the interventions studied in published literature have been carried out in large tertiary care centres in urban or peri-urban settings (mostly in developed countries). The grey literature cited in this thesis is either published by international NGOs (including WHO) or governments of developed countries. This is a limitation. There is a need for further research into interventions that are carried out in LMIC countries to address type-2 and type-3 WPV, especially in non-urban settings.

8. CONCLUSIONS and RECOMMENDATIONS

8.1. Conclusions

8.1.1. WPVH is a complex phenomenon

WPVH, including lateral violence as well as client-on-worker violence, is a manifestation of long-simmering deficiencies in a nation's health system and governance structure. Stand-alone interventions against WPVH are unlikely to succeed, unless the root causes of violence are themselves addressed. In India, this would mean UHC and better regulation of the private healthcare sector, and improved service delivery and appointment management in the public health system.

8.1.2. WPVH is costly

Healthcare violence threatens well-being of patients as well as staff, both of which represents immediate and long-term costs to healthcare organisations and the government. Survivors of WPV take care-related decisions based on the likelihood that adverse outcomes lead to violence, which affects their professional judgement. Refurbishment of hospitals and replacement of damaged equipment result in increased costs and treatment delays to the wider society. These costs are disproportionately borne by rural and underserved segments of society, accentuating exiting health-related inequities.

8.1.3. WPVH threatens patient safety

Not only is WPVH a challenge to hospitals and health workers, but it also threatens patient safety. Patients are endangered during violent incidents perpetrated by other patients or their relatives. Survivors of WPVH are likely to dissociate from their jobs and may also make mistakes that have bearing on patient care. When survivors take leave of absence or quit their jobs, the added workload on other employees lead to further deterioration in quality of care.

8.1.4. Prevention is key

Most WPVH is not recorded or reported for a number of reasons. Survivors who report incidents are unsatisfied with response and follow-through. Even with good institutional support, there is long-term impact on employee morale, task performance and intention-to-leave. It is therefore important to focus efforts on reducing number and severity of WPV incidents. Organisational and Environmental improvements that help reduce risk of violence should be prioritised.

8.1.5. Most WPVH can be prevented

Most incidents of WPVH can be prevented with a more open leadership style, that values both patient as well as employee equally. Healthcare organisations in India need to make earnest effort to shift from hierarchy-oriented culture to a more task-oriented culture. Preventing WPVH requires improved facility and Health System management, along with simpler and better reporting systems(128). Trans-disciplinary empowered teams should be formed, with committed leaders from all professions who would liaison with each other.

8.1.6. Some WPVH is inevitable

It is said that hospitals are places where people are having 'the best day of their lives, the worst day of their lives, the first day of their lives or the last day of their lives'. HW have the burden and the privilege of being near people at their most vulnerable moments. Even with committed efforts, HW and healthcare leaders should be realistic in their expectations of being able to avoid all incidents of WPVH. Violence prevention is to be approached an iterative and ongoing process dedicated to developing organisational culture and processes that make violence less necessary and more costly.

8.2. Recommendations

8.2.1. Organisations need broad-based strategies

Most healthcare organisations provide behavioural training to employees as a standard activity to address WPVH. For optimum results, training should be part of a broader complement of interventions aimed at preventing and managing WPV, including changes to organisational processes and the physical environment. Organisational culture that facilitates open and timely communication with clients, and shows commitment to eliminating uncivil behaviour between employees, is perhaps the most important strategy to prevent WPV. Institutional safeguards against WPV should become part of routine hospital accreditation process.

8.2.2. Prevention needs sector-wide approach

A sector-wide approach to education, support and regulation is recommended to address WPVH(65). Consumer Risk Assessment and sharing information regarding repeat offenders with other hospitals and law enforcement, helps organisations to take additional measures to keep both employees and patients safe. Private hospitals in India compete with each other to attract 'paying' patients (those who are able to afford OOP costs). Managers are more likely to make the necessary investments if the costs are borne across the sector. This also allows better coordination with law enforcement and the media etc. Leadership of professional associations should eliminate unethical practices that undermine public trust in the profession, such as artificially-imposed 'targets' and 'cuts'.

8.2.3. Post-incident Response should be strengthened

Despite more stringent laws, perpetrators of WPVH in India are able to avoid legal sanction. One major impediment for this is the cultural taboo against doctors seen to be taking legal action against patients who 'did not know better'. Post-incident response, including support and compensation to survivors, payment for refurbishment of damaged buildings and equipment, as well as legal follow-up of cases should ideally be handled via a third-party intermediary with sector-wide presence. Root cause analysis to be jointly conducted with representatives of management and staff.

8.2.4. Inter-sectoral linkages should be deepened

Healthcare organisations should invest in developing formal liaison with law enforcement and legal fraternity, as well as with civil society and the media. The government should increase budgetary outlays for health, and increase the scope of health coverage in the country. Courts, police and media should themselves adopt 'Zero Tolerance' policies towards WPVH.

8.2.5. More research should be done on WPVH in LMICs

Most research on interventions against WPVH are carried out in developed countries. Widespread prevalence and under-reporting of WPVH, as well as its consequences on Health Workers are well established even in LMICs. Further research should focus on quantifying impact of WPVH at the organisational/ Health System level, as well as on broad-based interventions.

8.2.6. WPVH prevention needs societal dialogue

Addressing WPVH truly needs a so-called 'whole of society and whole of government approach'(127). This involves formal and informal multi-sectoral engagements for policy coherence and mutual accountability in matters related to public health. Solutions should be broad-based and also include the civil society, academia, media, voluntary associations, communities, families and individuals. Healthcare leaders should engage in dialogue with the general public regarding true costs of WPVH to the community. Activities aimed at improving Health literacy of the general population should be prioritised. Doctors should strive to be seen and perceived as health advocates and activists fighting for the average person's right to UHC.

Plan for Implementation:

I am currently in touch with the Secretary of the Indian Medical Association, who is known for a 'Zero Tolerance' policy towards healthcare violence in the country. An intermediary organisation could be set up, that liaisons with hospitals for prevention and response to WPVH. One General insurance company has shown interest to develop a new product for managing compensation for survivors and costs associated with refurbishment of institutions. The details are being worked out.

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