DOI: 10.1002/hpm.3506

# RESEARCH ARTICLE

# WILEY

# Violence against health care workers in the workplace in Mozambique – An unrecognised managerial priority

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#### **Funding information**

Fundação para a Ciência e a Tecnologia, Grant/Award Number: GHTM UID/04413/2020

#### **Abstract**

**Introduction:** Recognition of the relevance of violence against health workers in their work place has been growing around the world. In Mozambique, workplace violence in the health sector needs better documentation. Therefore, this article is part of a study that describes the typology and the perceived impact of violence against health care workers in their workplace at the Lichinga Provincial Hospital and at the Health Centre of the City of Lichinga in 2019.

Method: This was an observational, descriptive, crosssectional study. The study was carried out in a simple random sample of health workers victims of violence at the Provincial Hospital and the Health Centre of the City of Lichinga, in the Province of Niassa in northern Mozambique. The guestionnaire applied was adapted from the original developed by the International Labour Organization, the International Council of Nurse, the World Health Organization and Public Services International and applied in Maputo, Mozambique during 2002. Statistical analysis was carried out with Statistical Package for the Social Sciences 20.0 and WinPepi 11.65. Results: Two hundred and 60 healthcare workers (HCW) were selected to participate, 180 agreed, 145 had inclusion criteria and five gave up participating in the study during the consent procedure. Thus, a total of 140 HCW answered the questionnaire. Predominant types of violence were: verbal threat/aggression 34% (n = 62/180); moral pressure/bullying/mobbing 30% (n = 54/180); ethnic discrimination 9% (n = 16/180); against personal property 6% (n = 10/180);

physical 4% (n = 8/180); sexual harassment 4% (n = 8/180). One hundred and 37 victims reported 154 episodes of violence, where 7% (n = 13/180) reported more than one type of violence. Most victims reported no reaction (55%, n = 76/137) and few said that they confronted the offender (16%, n = 22/137, particularly victims of sexual harassment, 38%, n = 3/8). Most HCW reported non-existence (39%, n = 54/137) or unawareness (32%, n = 44/137) of procedures to report violence within the Institution. Most (80%, n = 33/41) of those knowing about the procedures, knew how to use them. More than half (55%; n = 76/137) of HCW said that they were discouraged to report acts of violence. Conclusions: Like for previous studies in Mozambique and elsewhere in Africa, the study confirms: a relatively high prevalence, a reluctance to talk about the issue and unawareness about procedures on how to report incidents. The findings reconfirm the necessity for the development and implementation of procedures to address violence incidents towards HCW, to develop support services for victims of health workplace violence. Like elsewhere in Africa,

#### **KEYWORDS**

failed to address this issue.

health care workers, sub-Saharan Africa, violence, workplace

#### Highlights

 Evidence of high levels of violence against health care workers at the workplace (VHCW) documented over 20 years.

successive health workforce plans in Mozambique have

- This study documents high level of tolerance to non-physical violence.
- This study illustrates consistent underreporting of the problem.
- This study shows lack of policies and of effective management to deal with VHCW.

#### 1 | INTRODUCTION

In sub-Saharan Africa (SSA), studies on violence against healthcare workers (VHCW) have been reported from several countries: Congo,¹ Ethiopia,²-⁴ Gambia,⁵ Ghana,⁴-8 Malawi,⁵ Nigeria,¹0-¹5 Rwanda,¹-6 South Africa.¹7-²-2 Nevertheless, in most SSA countries the situation is not known and in those with studies only four (Ethiopia, Ghana, Nigeria and South Africa) have more than one published study. These publications acknowledge the endemic dimension of the phenomenon, the negative impact on healthcare workers (HCW) and services, a high level of tolerance to non-physical

violence and the absence of policies and of effective management measures to deal with violence, contributing to the underreporting of the problem.

# 1.1 | Violence against healthcare workers in Mozambique

In Mozambique, there is also a scarcity of studies on violence in the workplace in general<sup>23</sup> and in the health sector in particular.<sup>24-28</sup>

In a study with 396 HCW in hospitals and health centres in the city of Maputo in 2002, more than half of the employees reported having been victims of violence. The violence was mainly directed against nurses and hospital assistants. The most common forms of violence were verbal (n = 38%), moral pressure (n = 20%), physical (n = 8%), racial discrimination (n = 7%) and sexual harassment (n = 1%). The most mentioned aggressors were patients. The study encountered considerable resistance from staff and adherence was low. The violence in the health units was, according to the employees, caused by the lack of conditions to care for patients and the time patients had to wait to be treated. This violence was considered a normal situation, part of everyday life and for this reason and because the leaders were not prepared to act on the complaints, cases of violence were not reported.<sup>24</sup>

A 2003–2004 survey addressed to the managers of the 31 first-reference hospitals in Mozambique. In this survey, violence was recognized as a problem by hospital managers. In the opinion of these managers, the most frequently observed forms of violence against hospital workers in their workplace were (in descending order) sexual, discrimination and physical, against property, verbal and moral pressure. This violence was most often directed against (in descending order) administrative staff, technicians and others, nurses, doctors and members of the management team. The most frequent aggressors were patients; among colleagues, the most frequent aggressors were technicians, doctors, administrative personnel, nurses or members of the management team.<sup>25,26</sup>

Discussions in focus groups in the last quarter of 2007 and the first of 2008, covering health units in the provinces of Niassa, Nampula, Maputo Province and Maputo City, as part of the situation analysis within the scope of the preparation of the National Plan for the Development of Human Resources for Health 2008–2015 (PNDRHS)<sup>35</sup> identified that health personnel worked "under pressure (fear) and not moved by their own will (lacking intrinsic motivation)".<sup>27</sup>

A fourth study in several health units in Tete province in 2008, 42 HCW with assistance and administrative functions, identified sexual harassment in the workplace as a major problem. About a fifth (n = 19%) reported having heard about sexual harassment in the workplace and 24% reported having experienced sexual harassment in the workplace by colleagues.<sup>28</sup>

This article is part of a study that describes the typology and the perceived impact of VHCW at the Lichinga Provincial Hospital and at the Health Centre of the City of Lichinga in 2019. The results, already published, <sup>29</sup> confirm a typology similar to that observed in other countries and in previous studies in Mozambique. <sup>24</sup> In this article we focus on data not reported before, on management issues related to VHCW: the individual and institutional responses to the episode of violence as well as the impact of this episode on HCW and their performance.

#### 2 | METHODS

The methodological details are described in another article and described briefly in this section.<sup>29</sup>

### 2.1 | Study design

This is an observational, descriptive, cross-sectional study,<sup>30</sup> carried out from March to May 2019 in all departments of the Lichinga Provincial Hospital and at the Lichinga City Health Centre in the Niassa Province of Mozambique.

# 2.2 | Population and sampling

All HCW employed by the Lichinga Provincial Hospital and the Lichinga City Health Centre in the Niassa Province of Mozambique were potentially eligible for the study (n = 422). To define the sample size, a prevalence of 33.3%, an acceptable error of 5% and a power of 80% were assumed. The sample required was estimated to be 269 HCW. These were recruited following a simple sequential random sampling strategy.

#### 2.3 | Inclusion and exclusion criteira

The study included employees of the Lichinga Provincial Hospital and the Lichinga City Health Centre in the Niassa Province of Mozambique who reported any history of having suffered violence in the workplace in the past 12 months.

The study excluded HCW: who were on vacation or taking another type of leave; at the study health unit for less than 12 months; or who denied any history of having suffered violence in the workplace in the past 12 months.

#### 2.4 | Data collection instrument

This questionnaire survey collected information on violence in the health care units in the last 12 months before the study date, using a questionnaire adapted from the one used for the 2002 study in Maputo.<sup>24</sup>

The questionnaire had seven sections: the first section collected data on socio-demographic and professional characteristics of the respondent; and the other six sections aimed to document details of: physical violence; observed physical violence; verbal threat/aggression; moral pressure: sexual harassment; and discrimination. The majority of the questions had pre-defined multiple-choice options.

#### 2.5 | Data collection procedures

Permission to conduct the study was obtained at the beginning of data collection at Lichinga Provincial Hospital and Lichinga City Health Centre. The management of the health units was informed about the study and its purposes and relevance. Likewise, the purposes and relevance of the study were explained during the process of obtaining informed consent from HCW eligible to participate in the study. The participants' data were kept anonymous by way of coding the completed questionnaires. The location and time for the application of the questionnaires were negotiated with the management of each health unit covered. The questionnaires were applied in the field by the first author (SRP) and the answers registered by the respondents in printed questionnaires which, when completed, were returned to the researcher.

#### 2.6 | Statistical analysis

Data were entered into the statistical software "Statistical Package for Social Sciences" (SPSS) version 20.0 (IBM Corporation, Chicago-Illinois, USA). The analysis of the numerical data was essentially descriptive (percentages). When relevant, cross tabulation of categorical variables were tested with either Fisher Exact test, likelihood ratio chi-square, or Bartlett's modified chi-square, as appropriate, using WinPepi version 11.65.<sup>31</sup>



#### 2.7 | Ethical approval

The study was approved by the Institutional Committee on Bioethics in Health, Faculty of Medicine, Eduardo Mondlane University and Central Hospital of Maputo (registration number CIBS FM & HCM 097/2018, Comite Institucional de Bioetica para a Saude da Faculdade de Medicine & Hospital Central de Maputo). Informed consent was obtained from all participants before the questionnaire was applied.

#### 3 | RESULTS

# 3.1 | Study participants

A total of 260 HCW were invited to participate in this study: 180 agreed, 159 from the Provincial Hospital and 21 from the Health Centre (HC); but only 145 reported any history of having suffered violence in the workplace in the past 12 months, 124 from the hospital and 21 from the HC; five gave up participating in the study, four from the Hospital and one from the HC by providing an excuse of not having time to complete the questionnaire.

Hence 180 is the denominator to estimate the prevalence of violence and 140 (or lower if the response rate for a specific question is not 100%) is the denominator to detail the characteristics of the violence as reported in the questionnaires.

## 3.2 | Prevalence of different types of violence

The prevalence of violence of any kind was 81% (145 who reported reported history of violence in the workplace in the past 12 months/180 that agreed to participate): 78% (n = 124/159) in the hospital and 100% (n = 21/21) in the health centre.

The relative prevalence of different types of violence were: verbal threat/aggression 34% (n = 62/180); moral pressure/bullying/mobbing 30% (n = 54/180); ethnic discrimination 9% (n = 16/180); against personal property 6% (n = 10/180); physical 4% (n = 8/180); sexual harassment 4% (n = 8/180). One hundred and 37 victims reported 154 episodes of violence, where 7% (n = 13/180) reported more than one type of violence.

#### 3.3 | Staff categorisation

Of the 140 participants (120 based at the hospital and 20 based at the health centre), 126 (90%) were full-time members of staff. The career structures are complex in the Mozambican public health sector, hence the diversity of categories reported upon<sup>32</sup>: 31% (n = 44) were mid-level or basic nurses, 21% (n = 29) health technicians with a higher degree (biologists, nurses, pharmacists, psychologists or laboratory, surgery, ophthalmology or speech therapy technicians), 16% (n = 22) doctors, 16% (n = 22) mid-level trained health technicians of the "specific health careers", 10% (n = 14) administrative staff, 6% (n = 9) from other categories (auxiliary administrative and service agents, social workers, data entry, drivers, security).

### 3.4 | Socio-demographic characteristics

The victims of violence were predominantly male (69%, n = 96/140) for all types of violence. Most were single, widowed or divorced (54%, n = 76/140). Women reporting VHCW peaked in the age group 30–34 years and men in

the age groups over 40 (likelihood ratio p = 0.049), with women (n = 12/65, 19%) reporting less frequently common law unions than men (n = 24/75, 32%) (likelihood ratio p = 0.015).

# 3.5 | Perpetrators of violence

Perpetrators of violence were mostly males over 18 years of age for all types of violence except for sexual harassment; this was particularly accentuated for bullying and sexual harassment The most frequent aggressors were patients' relatives or escorts followed from staff from the two health institutions under study, but with variations according to the type of violence: local health facility staff were the most frequent aggressors in the categories of verbal violence and bullying, and equally important, together with patients, for sexual harassment; for discrimination and physical violence the main aggressors were patients' relatives (likelihood ratio p = 0.045) (Table 1).

# 3.6 | Reactions of the victims to the aggressor

Response of the victims to the episode of violence varied from not taking any action to direct confrontation of the offender, depending on the type of violence. For most types of violence no action was taken. The exception was for sexual harassment, and the most frequent action was direct confrontation of the offender (Bartlett's modified chi-square p = 0.000) (Table 2).

# 3.7 | Impact of the violence on the victims

The participants of this study pointed out that violence in the workplace resulted in several consequences for the victims, among them, the following stand out: psychological problems, destruction of a good working environment (especially teamwork); disturbing and repetitive memories, thoughts and images of the incident; hyper-alertness in the workplace; feeling of overworking and lack of motivation at work; injury; absences for a few days from the workplace and, in some cases, feelings of guilt. The frequency of these varied with the type of violence. For verbal violence and bullying, over 50% of the victims reported persistence of "Repeated, disturbing memories, thoughts, or images of the attack" and "Avoiding thinking about or talking about the attack or avoiding having feelings related to it". For discrimination, physical violence and, particularly for sexual harassment 50% or more of the victims reported the full range of symptoms that we inquired about: "Repeated, disturbing memories, thoughts, or images of the attack",

TABLE 1 Characterisation of the perpetrators of violence

		Sex of the agressors	Age ratio of the agressors				
Type of violence	Health facility staff	Patients' relatives/ escorts	Patients/ users	External health staff	Other	Male/female ratio	>18/≤18 years of age
Verbal violence (n = 62)	25 (40%)	23 (37%)	11 (18%)	1 (2%)	2 (3%)	3.75	All >18
Moral pressure/bullying/ mobbing (n = 54)	24 (44%)	20 (37%)	4 (7%)	0	3 (6%)	4.30	26.50
Discrimination (n = 16)	4 (25%)	9 (60%)	1 (6%)	1 (6%)	1 (6%)	2.40	3.75
Physical violence (n = 8)	0	3 (38%)	2 (25%)	2 (25%)	1 (13%)	3.00	3.00
Sexual harassment ( $n = 8$ )	3 (38%)	2 (25%)	3 (38%)	0	0	0.75	7.00

<sup>&</sup>lt;sup>a</sup>Likelihood ratio p = 0.045.

TABLE 2 Response of the victims to the episode of violence

	Actions tak	Actions taken by the victims (row percentages)	s (row percenta	ges)						
Type of violence	No action	Confronted the offender	Pretended that nothing happened	Shared the situation with friends/ relatives	Reported to supervisor	Shared with colleague	Asked for counselling/ support from professional association	Changed to another service unit	Reported to the police/legal	Other
Verbal violence $(n = 62)$	19 (31%)	9 (15%)	0	5 (8%)	9 (15%)	7 (11%)	7 (11%)	1 (2%)	7 (11%)	1 (2%)
Moral pressure/bullying/mobbing ( $n = 54$ )	20 (37%)	9 (17%)	10 (19%)	0	2 (9%)	4 (7%)	2 (4%)	0	9 (17%)	1 (2%)
Discrimination $(n = 16)$	8 (50%)	0	3 (19%)	2 (13%)	0	0	0	0	1 (6%)	1 (6%)
Physical violence $(n = 8)$	2 (25%)	0	2 (25%)	1 (13%)	1	1 (13%)	0	0	1 (13%)	0
Sexual harassment $(n = 8)$	2 (25%)	3 (38%)	1 (13%)	0	1 (13%)	0	1 (13%)	0	0	0

*Note*: Bartlett's modified chi-square p = 0.000.

PATRÍCIO ET AL "Avoiding thinking about or talking about the attack or avoiding having feelings related to it", "Being super-alert or watchful and on guard" and "Feeling like everything you did was an effort" (likelihood ratio not statistically significant) (Table 3). Procedures to report violence

Most HCW reported non-existence (39%, n = 54/137) or unawareness (32%, n = 44/137) of procedures to report violence within the Institution. Most (80%, n = 33/41) of those knowing about the procedures, knew how to use them (no statistically significant differences between hospital and health centre victims). Awareness of procedures was highest among hospital staff (Fisher exact test p = 0.09) (Table 4).

Just over half (55%; n = 76/137) of HCW said that they were discouraged to report acts of violence. There were differences between hospital and health centre: in the hospital 49% (n = 58/119) felt encouraged to report the incident, but only 22% in the health centre (n = 4/18) (Fisher exact test p = 0.04). Of the 61 that felt encouraged, 48% (n = 29) replied that they felt encouraged by their colleagues, 44% (n = 27) by the supervisors, 18% (n = 11) by the professional association/union, 7% (n = 4) by family and friends, 5% (n = 3) by patients and companions and, finally, 5% (n = 3) by other people (more than one option possible).

### Actions taken to deal with the violence

Measures, mostly by the direct supervisor, were taken to investigate the incident in 88% (n = 14) of cases of discrimination, in 63% (n = 5) of cases of physical violence, in 38% (n = 3) for cases of sexual harassment, in 24% (n = 15) of

TABLE 3 Problems and complaints of victims of violence post-aggression

Since you were attacked have you been bothered	Verbal aggres			Discrimination		Physical aggression		Sexual harassment		
by:	N	%	N	%	N	%	N	%	N	%
Number of respondents in the hospital	56		48		16		8		8	
Repeated, disturbing memories, thoughts, or images of the attack?	31	55	27	56	8	50	4	50	6	75
Avoiding thinking about or talking about the attack or avoiding having feelings related to it?	32	57	29	60	8	50	4	50	4	50
Being "super-alert" or watchful and on guard?	21	38	13	27	11	69	4	50	5	63
Feeling like everything you did was an effort?	21	38	10	21	9	56	4	50	5	63
Number of respondents in the health centre	6		6		-	-	-	-	-	-
Repeated, disturbing memories, thoughts, or images of the attack?	3	50	2	33	-	-	-	-	-	-
Avoiding thinking about or talking about the attack or avoiding having feelings related to it?	5	83	3	50	-	-	-	-	-	-
Being "super-alert" or watchful and on guard?	0	0	0	0	-	-	-	-	-	-
Feeling like everything you did was an effort?	0	0	0	0	-	-	-	-	-	-

<sup>\*</sup>Likelihood ratio not significant.



TABLE 4 Existence of procedures to denounce cases of violence against health care workers

		Hospital (%)	Health centre
Do you know about the procedure to report	Yes	41/120 (34)	1/20 (5%)
violence?*	No	42/120 (35)	12/20 (60%)
	Not sure	37/120 (31)	7/20 (35%)
If yes do you know how to use them?**	Yes	33/41 (80)	0
	No	8/41 (20)	1/1

Note: \*, \*\*Fisher exact test p = 0.09.

verbal threat/aggression and at 9% (n = 5) of moral pressure situations: only a minority of HCW received any form of support (Table 5).

For most incidents there were no known consequences for the perpetrators (Table 6).

For the 144 episodes of violence with valid answers, 44% (n = 63) were "not satisfied" with the way in which the institution dealt with the incident, 30% (n = 43) were "very dissatisfied", 24% (n = 35) were "satisfied" and only 2% (n = 3) chose the option "very satisfied".

### 3.10 | Level of concern of the victims about violence in the workplace

Regarding the question about what their level of concern about violence at the Provincial Hospital or at the City Health Centre, from a total of 135 HCW 39% (n = 53) responded that they were "concerned", 21% (n = 28) "very concerned", 19% (n = 26) "extremely concerned", 16% (n = 21) "slightly concerned" and 5% (n = 7) "not at all concerned".

# 3.11 | Victims' opinions on measures to address violence in the work setting

Of the 96 respondents with valid responses, 36% (n = 35) recommended the adoption and encouragement of a wide range of reporting procedures (to the police, to management, to colleagues, to the public, to workers' union, to professional associations and to traditional authorities); 21% (n = 20) suggested regular interventions to develop and maintain skills and create awareness; competence centres in health facilities (police posts, support and reporting offices) should be developed (14%,n = 13); punishment should be exemplary and public (13%, n = 12); surveillance cameras would help to record and to control, raise alarm or call attention to aggression episodes while they are happening (11%, n = 11); encourage development of skills to adopt non-punitive measures directed at the aggressors (confronting and/or counselling him or her) (8%, n = 8); pre-empting violence could be achieved to some extent by creating community and leadership awareness (4%, n = 4) (more than one option possible).

# 4 | DISCUSSION

This paper adds to the body of literature supporting the argument that VHCW is a significant public health problem, that affects mostly young professionals, usually nurses.<sup>33</sup> This problem is endemic, although subject to acute surge events of violence under situations of armed conflict and/or public health emergencies.<sup>34-40</sup>

The first published research on VHCW in Mozambique took place in 2002.<sup>24</sup> Since then several studies, <sup>25-28</sup> including this study, confirmed previous findings: high prevalence, unawareness about procedures on how to report incidents and inadequate handling by the institution leading to feelings of frustration, demotivation and absenteeism.

TABLE 5 Institutional actions taken to investigate the violence

Type of violence	Cases with follow up	Who did the follow up	Institutional support received by victim	
Verbal violence (n = 62)	15	11 - supervisor	12 - counselling	
		1 each -	8 – submission of report	
		1 police,	2 - other	
		1 therapist,		
		1 provincial authority,		
		1 other		
Moral pressure/bullying/	5	4 - supervisor	8 - counselling	
mobbing $(n = 54)$		1- Police	2 – submission of report	
			1 - other	
Discrimination ( $n = 16$ )	14	1 - police	4 - counselling	
			1 – submission of report	
			1 - other	
Physical violence (n = 8)	5	4- Supervisor	5 - counselling services	
		1 - police		
Sexual harassment (n = 8)	3	1 each - supervisor,	3 - counselling services	
		1 professional association,	1 – submission of report	
		1 police		

Note: Numbers too small for statistical analysis.

TABLE 6 Consequences for the perpetrators of violence

Type of violence	Verba (n = 6			Moral pressure/bullying/ mobbing (n = 54)		Discrimination (n = 16)		Physical (n = 8)		Sexual (n = 8)	
Consequences	N	%	N	%	N	%	N	%	N	%	
Verbal reprehension	4	6	1	2	0	0	2	25	1	13	
Interruption of care	2	3	1	2	0	0	0	0	0	0	
Notifying the police	1	2	1	2	0	0	1	13	1	13	
Other consequences	1	2	0	0	0	0	0	0	0	0	

Note: Numbers too small for statistical analysis.

The patterns of violence observed in Niassa were also consistent with those reported from elsewhere in SSA, with a predominance of verbal violence. 1,6,9,18,20,21

Unlike other African studies that show a predominance of females among victims of VHCW, 1.6,14 our sample had a predominance of male victims. But studies from other continents report a predominance of males among victims of VHCW<sup>41-43</sup> Talas et al. (2011) speculates that showing disrespect to women is a culturally unacceptable behaviour in predominantly Muslim societies, like Niassa, making men the favourite target for VHCW.<sup>42</sup> Another possibility is the presence of sampling bias because of the 54% response rate observed for this study and around 60% of participants being male.

Also, like in most studies, the main aggressors in Niassa were relatives/escorts followed by patients. 1,3,5,9,12

The literature does not show any consistent pattern regarding marital status of victims of VHCW. Like for our results, it is possible to identify studies with a predominance of victims living alone (single, divorced, separated or widowed),<sup>2,4,6</sup> although the reverse has also been reported.<sup>5,12</sup>

As reported elsewhere, VHCW has an impact in terms of persistent symptoms compatible with post-traumatic syndrome and burnout. 4,6,9,10,44

Despite this significant impact, HCW do not know how to handle violence directed against them. As most incidents are not reported, it is not surprising that HCW do not feel supported by the institutions where they work and are not satisfied with the outcomes of the responses to violence. <sup>4,6,16</sup> Poor support/supervision is an important determinant of health worker absenteeism. <sup>45</sup>

Violence against healthcare workers remains invisible nor only at institutional level but also at the highest levels of policy-making. In the 20 years since the first study several Mozambican workforce strategic plans (2001–2010, 2006–2010, 2008–2015, 2016–2025) were elaborated with no mention of this issue. A workforce observatory was established in 2011 and VHCW has not been part of its agenda. The same seems to be true for many other SSA countries.<sup>46</sup>

#### 4.1 | Limitations

Our study was limited to two health facilities in the city of Lichinga and, thus, the particular social, cultural, economic and physical context of the research may limit the generalisability of the findings.<sup>47</sup> However, data that are contextually relevant to one setting are often useful to decision makers – who assess generalisability of evidence from the perspective of perceived "relevance" - in other settings.<sup>48</sup> This particularly so when research findings corroborate those of previous studies [for example, the 2002 survey carried out in Maputo City (Mozambique)]<sup>24</sup> and are also aligned with the existing published literature on the subject.

The study explores the occurrence of violence in health care services setting from a health care worker perspective only. Additionally, the study strived to document previous self-reported experiences of health care workers which may implicate the usual limitations of inaccurate recall of past events<sup>49</sup>; this is particularly true when the event recalled was a violent one; there are studies that show that higher exposure to violence is associated with lower short-term memory abilities.<sup>50</sup> This bias would imply that the problem is probably being under-reported, which increases the policy significance of our findings.

Lastly, a total of 260 HCW were invited to participate in this study, but in the end only 140 (54%) agreed to participate. As we did not register any data on the cases that did not participate, we are not able to exclude the possibility of bias resulting from the study sample.

#### 5 | CONCLUSIONS

In line with the existing published literature, this study confirms that violence and aggression towards health care workers is an important problem in the health care settings in Lichinga, Niassa. However, the VHCW remains somehow an ignored issue in health policy and strategies, including in the current Mozambican workforce strategic plan 2016–2025 and in the existing agenda of the Mozambican health care workforce observatory. High occurrence of unawareness about procedures on how to report incidents and inadequate handling by the institution is a significant bottleneck. The study confirms the necessity for the development and implementation of guidelines proposed more than 2 decades ago by International Labour Organization/International Council of Nurses/World Health Organization<sup>17</sup>: zero tolerance, reporting and follow-up procedures on violence and aggression incidents towards health care workers, as well as the establishment of services for adequate support to victims of health workplace violence among others. This study illustrates the large time gap between detecting a problem, defining the needed interventions and implementing them. This time-gap is unacceptable.

#### **ACKNOWLEDGEMENTS**

We acknowledge support of the Niassa Provincial Health Directorate (provided administrative authorization and support for the research to be carried out). We are also thankful to all study participants for their time and effort by taking part in the study. Professor Inês Fronteira advised on the statistical analysis. The Research Center on Global Health and Tropical Medicine (GHTM) receives support from the Portuguese Science and Technology Foundation (grant GHTM UID/04413/2020).

#### **CONFLICT OF INTEREST**

The authors declare that they have no competing interests. The study did not involve any type of financial gains or interests. It was done within an academic requirement (Master in Public Health [MPH] degree). The first author (Sérgio Roques Patrício) was a MPH student carrying the study and the co-authors (Paulo Ferrinho and Mohsin Sidat) were his supervisors.

#### DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

#### **ETHICS STATEMENT**

The study was approved by the Institutional Committee on Bioethics in Health, Faculty of Medicine, Eduardo Mondlane University and Central Hospital of Maputo (registration number CIBS FM & HCM 097/2018). Informed consent was obtained from all participants before the questionnaire was applied.

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**How to cite this article:** Patrício SR, Ferrinho P, Sidat M. Violence against health care workers in the workplace in Mozambique – An unrecognised managerial priority. *Int J Health Plann Mgmt*. 2022;37(5):2822-2835. https://doi.org/10.1002/hpm.3506