

WORKPLACE VIOLENCE IN DENTISTRY: PREVALENCE, CHARACTERISTICS, AND CONCERNS AMONG DENTAL PROFESSIONALS

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ABSTRACT

Aim of the study. This study investigates workplace violence among dentists and dental nurses in Romania, focusing on verbal and physical abuse, the main perpetrators, concerns regarding this phenomenon and the reporting mechanisms available in dental institutions. **Materials and methods.** A cross-sectional study was conducted using an online questionnaire, based on the Workplace Violence in the Health Sector - Country Case Studies Research Instruments, developed by WHO, ILO, ICN, and PSI. The survey was distributed online to members of the Romanian College of Dentists and the Order of General Nurses, Midwives, and Nurses of Romania. Descriptive statistics, univariate, and multivariate analyses were performed using SPSS version 18, with statistical significance set at $p < 0.05$. **Results.** A total of 246 participants (27.6% dentists, 72.4% dental nurses) were included. will be structured as shown here. Verbal violence was reported more frequently than physical violence - 19.1% of dentists and 4.5% of dental nurses reported experiencing verbal abuse, with patients being the main aggressors. Physical violence was significantly less common, affecting 7.4% of dentists and 1.1% of dental nurses. Female dentists had a higher risk of experiencing physical abuse. Additionally, 51.5% of dentists and 37.1% of dental nurses reported the absence of workplace violence reporting procedures in their institutions. **Conclusions.** Workplace violence represents a significant issue in dental healthcare, with verbal abuse being more frequent than physical aggression. Dentists are more affected than dental nurses, and female dentists are particularly vulnerable to physical violence.

Key words: verbal violence, physical violence, dentist, dental nurse, workplace violence

INTRODUCTION

In recent years, workplace violence has become an increasingly concerning problem in the healthcare sector with a growing number of reported incidents [1]. According to the World Health Organization (WHO), up to 62% of healthcare professionals have been victims of workplace violence during their careers [2]. The National Institute for Occupational Safety and Health (NIOSH) defines workplace violence as any violent act - including threats and physical attacks - directed at directed toward persons at work or on duty [3].

Among the various forms of workplace violence, physical and verbal aggression are the most frequently reported and patients and visitors are the main perpetrators [4]. Studies

evaluated the prevalence and characteristics of workplace violence affecting mainly physicians and nurses. Only a few studies focus specifically on dentists and dental nurses, with most research evaluating workplace violence from the perspective of dental students [5,6]. Despite this gap in research, the dental profession is at high risk for such incidents because of the crowded nature of dental clinics and the direct, often prolonged, interaction with patients. A 2019 meta-analysis evaluating workplace violence in dentistry reported that verbal violence was more often encountered compared to physical violence, with incidence ranging between 8.2% and 58.7% compared to 4.6% to 22% [5].

In the Romanian healthcare sector, this

phenomenon remains an understudied issue. In 2017, the Romanian College of Physicians conducted a survey among doctors in Bucharest, highlighting workplace violence as a growing concern [7].

The objective of our study is to determine the prevalence of physical and verbal violence against dentists and dental nurses, as well as to identify socio-demographic and professional risk factors, the main aggressors, and the concerns of the participants regarding workplace violence. To the best of our knowledge, there is no published data specifically addressing workplace violence in dentistry in Romania.

MATERIALS AND METHODS

This cross-sectional study aimed to assess socio-demographic and professional characteristics, as well as the prevalence, perpetrators, and concerns about workplace violence of dental nurses and dentists during a one-year period. Data were collected using a Romanian-translated version of the *Workplace Violence in the Health Sector Country Case Studies Research Instruments – Survey Questionnaire*, originally developed and validated by International Labour Organization (ILO), International Council of Nurses (ICN), WHO, and Public Services International (PSI) in 2003 (permission request No. 384763) [8]. A web-based questionnaire was developed using Google Forms, and the survey link was distributed online to members of the Romanian College of Dentists and the Order of General Nurses, Midwives, and Nurses of Romania. The questionnaire was also distributed in two Facebook groups dedicated to dentists and nurses. Data collection took place over a two-month period, from 10th of February to 10th of April 2022. Data were analyzed using the SPSS software, version 18. We calculated frequencies and percentages and we performed

univariate and multivariate analyses. The threshold for statistical significance was set at p-value of 0.05.

This research received approval from the Research Ethics Committee of the Grigore T. Popa University of Medicine and Pharmacy Iași (No. 52/21.02.2021). All participants were informed about the methodology and objectives of our study and provided their informed consent for participation. All the responses were anonymous and data confidentiality was maintained throughout the study. The inclusion criteria for this study are the ones related to the profession, i.e. participants had to be either dentists or dental nurses.

RESULTS

A total of 246 participants were included in our study, consisting of 27.6% dentists and 72.4% dental nurses. The majority of participants were female (89%), under the age of 45 (79.7%), married (59.3%), and working full-time (85%) in the private sector (78.5%) (Table 1). Verbal violence was reported more frequently than physical violence (Table 2). One in five dentists (19.1%) reported experiencing verbal violence at work, with incidents initiated equally by patients (38.5%) and colleagues (38.5%) (Table 3). Among dental nurses, 4.5% reported being victims of verbal violence in the workplace (Table 2). In their cases, colleagues (50%) were the most frequent aggressors, followed by patients (37.5%) and patients' relatives (12.5%) (Table 3). Physical violence was significantly less frequently reported by the participants (Table 2). 7.4% of dentists and 1.1% of dental nurses reported experiencing physical aggression at work. Among dentists, 40% of physical violence cases were initiated by patients. No dental nurses reported being victims of patients' physical violence. However, in both professional groups, there were reported cases

Statistically significant differences were found between the two professional

categories, suggesting that dentists are more likely than dental nurses to experience both physical ($p = 0.015$) and verbal violence ($p = 0.001$) in the workplace (Table 2).

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The multivariate analysis of socio-demographic and professional factors associated with physical and verbal violence in dental healthcare settings identified only one statistically significant association: female dentists have a higher risk of experiencing physical violence compared to male dentists (Table 5).

Table 5. Multivariate analysis of physical and verbal violence incidents and socio-demographic and professional characteristics of participants

Dependent variable	Dentist				Dental Nurse			
	Physical Violence		Verbal Violence		Physical Violence		Verbal Violence	
	OR	CI 95%	OR	CI 95%	OR	CI 95%	OR	CI 95%
Gender								
Male#	-	-	-	-	-	-	-	-
Female	1.67*	0.82-3.41	0.86	0.16-4.70	0.41	0.23-0.73	1.09	0.45-2.63
Age								
Under 45	0.600	0.29-1.23	0.76	0.10-5.54	1.00	0.06-1.99	1.13	0.46-2.75
Over 45#	-	-	-	-	-	-	-	-
Marital Status								
Married#	-	-	-	-	-	-	-	-
Married	0.06	0.01-0.47	0.21	0.06-0.75	0.50	0.05-5.14	0.29	0.06-1.38
Professional Experience								
Less than 5 years	0.14	0.06-0.29	2.15	0.26-17.8	0.52	0.40-0.67	0.66	0.25-2.24
Over 5 years#	-	-	-	-	-	-	-	-
Employment Sector								
Private sector	0.02	0.01-0.06	0.12	0.05-0.27	0.07	0.03-0.13	0.37	0.23-0.60
Public sector#	-	-	-	-	-	-	-	-
Working Patterns								
Full-time employment								
Yes	0.10	0.03-0.34	0.35	0.16-0.80	0.03	0.01-0.11	0.09	0.04-0.21
No#	-	-	-	-	-	-	-	-
Shift Work								
Yes	0.26	0.05-1.39	0.71	0.24-2.10	0.01	0.00-0.03	0.22	0.05-1.04
No#	-	-	-	-	-	-	-	-

#reference category

*p<0,05

None of the other examined factors (age, marital status, professional experience, workplace setting, or work schedule) were

significantly associated with either physical or verbal violence among dentists or dental nurses. Dentists with less than five years of

experience appeared to have a lower risk of physical abuse, possibly due to their professional status or reduced exposure to workplace violence incidents. Also, healthcare professionals working in the private sector showed a tendency toward a lower risk of both physical and verbal abuse.

The analysis of concerns regarding workplace violence revealed a statistically significant difference between dental nurses

and dentists ($p = 0.004$). A higher proportion of dental nurses (68%) reported that they were not at all concerned about workplace violence, compared to 44.1% of dentists. More dentists reported higher levels of concern, with 13.2% reporting they were very concerned, compared to only 5.6% of dental nurses (Table 6). These findings suggest that dentists perceive a greater risk of workplace violence compared to dental nurses.

Table 6. Participants' Concerns on Workplace Violence

Item	Dentist n (%)	Dental nurse n (%)	p-Value*
Concern About Workplace Violence			0.004
Not at all	30 (44.1)	121 (68)	
Slightly	18 (26.5)	31 (17.4)	
Moderately	7 (10.3)	14 (7.9)	
Quite a lot	4 (5.9)	2 (1.1)	
Very much	9 (13.2)	10 (5.6)	
Reporting Procedures for Workplace Violence Exist in the Institution			0.121
No	35 (51.5)	66 (37.1)	
Yes	16 (23.5)	53 (29.8)	
I don't know	17 (25.0)	59 (33.1)	

* p-values for chi-square test were provided, bold p-value indicates statistical significance.

Regarding the existence of workplace violence reporting procedures, no significant difference was found between the two professional groups ($p = 0.121$). However, a higher proportion of dentists (51.5%) compared to dental nurses (37.1%) stated that no reporting procedures were in use in their workplace (Table 6). An important finding is that a high percentage of both groups were unaware of the existence of such procedures in their workplace (33.1% of dental nurses and 25.0% of dentists).

DISCUSSIONS

To the best of our knowledge, this is the first study addressing the workplace violence affecting dentists and dental nurses in Romania. Our results confirm that verbal and

physical violence are present in the professional lives of dental healthcare workers, with verbal abuse being more frequent than physical violence. This result aligns with existing literature and similar findings in other healthcare professions. A meta-analysis on workplace violence among doctors and nurses revealed that while both verbal and physical violence occur in the healthcare sector, verbal abuse is more common [2]. A similar result was reported in Romania, where 85% of doctors working in the capital city had experienced verbal abuse, while 10.2% had been victims of physical violence [7].

Our findings are also consistent with previous research on oral healthcare professionals. A meta-analysis on workplace

violence in dentistry found a low prevalence of physical violence, while verbal violence was more frequent [5]. Similarly, a study conducted among 112 dental surgeons in India reported a prevalence of 0.9% for physical violence and 39.3% for verbal violence. The mentioned causes were long waiting times, high costs, and appointment cancellations [9]. Studies on dental students have also revealed similar trends. Research conducted in New York found that 27.5% of dental students had experienced at least one episode of physical violence from patients, while 86.2% had been victims of verbal violence [10]. Another study on 121 dental students who were victims of patient-initiated violence in Saudi Arabia reported that 2.48% experienced physical violence and 30.58% suffered verbal harassment [6].

A particular finding in our study is the increased vulnerability of female dentists to physical violence. Similar results have been observed in other studies, where patriarchal societal norms and gender stereotypes were identified as factors contributing to this phenomenon [5,11]. In the healthcare sector, patients and their relatives are commonly identified as the usual aggressors [2]. Our findings confirm this tendency, with dentists and dental nurses reporting workplace violence initiated by patients and their relatives. However, an alarming finding of our study is the high percentage of workplace violence incidents initiated by colleagues, with rates similar to those started by the patients.

Direct contact with patients is a recognized risk factor for workplace violence among healthcare professionals [2]. In dentistry, patients can be particularly challenging and difficult to interact with. A study conducted in Germany found that dentists perceived their patients as more difficult compared to primary care doctors,

finding them to be demanding, anxious, and prone to interrogation. Among these factors, dental anxiety is particularly relevant since it affects the dentist-patient relationship [12]. A study on oral health in the north-eastern region of Romania found that among the main reasons for avoiding dental visits were treatment costs and dental fear [13]. Anxious patients require more time, attention, and effort, making clear communication a fundamental aspect of dental practice [12]. A good dentist must inform, educate, and patiently explain procedures, understand the expectations of the patients and encourage patients to follow long-term dental care [14].

Compared to medical procedures that take place in hospitals, dental treatments are generally less invasive and are associated with lower patient risk [15]. However, technological advancements in dentistry have introduced new treatment options, which can sometimes lead to higher patient expectations and dissatisfaction. In Romania, patients often develop excessive or unrealistic expectations regarding dental treatments, which further impacts the dentist-patient relationship [16].

In the Romanian healthcare system, dentists are typically in the front line communicating with patients, while nurses often act as assistants for the doctors, providing support rather than direct patient interaction. In some cases, dental nurses may also handle administrative tasks, such as appointment scheduling, making them less involved during treatments [17]. This could explain why patients tend to manifest aggressive behaviours toward dentists, while nurses are more frequently victims of violence between colleagues. A well-coordinated dental team improves efficiency and the quality of care. Therefore, it is essential that team members communicate effectively, remain open to feedback, and

collaborate to provide high-quality treatment [14].

Our study also revealed a lack of workplace violence reporting procedures in dental institutions, with 37.1% of dental nurses and 51.5% of dentists mentioning the absence of such protocols. This can also be linked to difficulties in reporting this type of incidents [18]. Moreover, our findings indicate that dentists feel greater concern about workplace violence than dental nurses, which correlates with their higher prevalence of verbal and physical violence. A report by the National Health Service (NHS) stated that dentists are less informed than other healthcare professionals about reporting procedures and workplace protection measures [19]. Another study highlighted that after experiencing an episode of workplace violence, dental students felt that their future medical practice was influenced, while some believed that these experiences affected their communication with patients [6].

In Romania, dental care is primarily funded through private sources, meaning that patients must cover most treatment costs out-of-pocket [13]. The dental workforce is mainly distributed in small dental offices with limited number of employees [17]. This reality is linked to the socio-economic status of the population, where many individuals seek dental services only when absolutely necessary [13]. A study comparing the dental workforce in 11 countries in Europe supported this by mentioning that most Romanian dental offices employ only one dentist, and that dental nurse positions are often limited or even absent. These small medical teams might, at first glance, not need protocols regarding workplace violence. However, a recent study emphasized the importance of implementing structured protocols in all Romanian dental offices. In

these cases, human resources protocols could prove helpful in solving medical team conflicts and address internal violence, which our study found to be especially prevalent [20].

A major strength of this study is that it provides the first assessment of workplace violence among dentists and dental nurses in Romania. Additionally, the study includes both dentists and dental nurses, allowing for a comparative perspective on how these two professional groups experience workplace violence. The use of a standardized and internationally validated questionnaire ensures that the findings can be compared with studies conducted in other countries. However, several limitations should be considered. The online data collection method may have led to selection bias, as those who had experienced workplace violence might have been more inclined to participate, while the study sample might be relatively small.

CONCLUSIONS

1. Workplace violence is present in dental healthcare, with verbal violence being more frequent than physical violence.
2. Dentists are more exposed to workplace violence than dental nurses, with significant differences for both verbal and physical violence.
3. Female dentists are at a higher risk of physical violence compared to their male counterparts.
4. While patients and their relatives are the main aggressors, workplace violence initiated by colleagues is also frequent, raising concerns about the work environment within dental teams.
5. Dentists experience greater concern regarding workplace violence than dental nurses, which aligns with their higher exposure to verbal and physical

- aggression.
6. A significant number of dentists and nurses are either unaware of reporting procedures or work in places without such protocols regarding workplace violence. This indicates a potential deficiency in the communication or implementation of workplace violence reporting measures.
 7. Internal workplace violence is a significant concern, and promoting open communication and collaboration can

improve both quality of care and workplace safety.

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Abbreviations

WHO World Health Organization
NIOSH National Institute for Occupational Safety and Health
ILO International Labour Organization
ICN International Council of Nurses
PSI Public Services International
SPSS Statistical Package for the Social Sciences
CI Confidence Intervals
OR Odds Ratio
NHS National Health Service

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