

# Workplace Violence in Tertiary Hospitals: Unraveling Its Detrimental Effects on Healthcare Workers' Job Engagement

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## ABSTRACT

**Background:** Workplace (WPW) violence is a significant issue among healthcare workers (HCWs) in hospitals and negatively impacts the healthcare workforce. WPW can have more severe consequences, especially in tertiary hospitals with a concentrated, specialised workforce. In this regard, the study aimed to identify the dynamics of workplace violence exposure among HCWs in a tertiary hospital. It also investigated its impact on job engagement.

**Methods:** The study was designed as a descriptive cross-sectional study conducted between June and September 2023. The study involved 3,526 HCWs at a tertiary hospital in Turkey, all invited, with 390 participating.

The study examined healthcare workers' ability to handle WPV. It also examined their exposure to violence, their perception of safety against violence at work, and their engagement in their jobs. **Results:** Exposure to WPV among HCWs included in the study significantly predicts job engagement, with a negative relationship ( $\beta: -0.473$ ). Additionally, as HCWs' skills in managing WPV increase, job engagement also increases ( $\beta: -0.279$ ). Among younger and less experienced HCWs, WPV exposure and job engagement scores were significantly lower ( $p < 0.05$ ).

**Conclusions:** WPV, common among health workers, is an essential factor that reduces work engagement. Identifying and controlling the dynamics of WPV is critical to enhancing job engagement among healthcare workers and preventing related adverse outcomes.

**KEYWORDS:** Workplace Violence; Healthcare Worker; Safety; Commitment; Management

## 1. INTRODUCTION

Hospitals play a crucial role in providing healthcare services. In these settings, healthcare workers (HCWs) face numerous workplace risks and hazards [1]. Incidents of violence in hospitals represent one of the most challenging situations that HCWs face among these risks and hazards [2]. The World Health Organization (WHO) emphasizes the significance of workplace violence (WPV) in the healthcare sector, highlighting that a significant portion of violent incidents occur in hospitals [3].

Incidents of violence in healthcare observed worldwide have taken on the characteristics of an epidemic, affecting nearly all HCWs in hospitals [4].

WPV, manifesting in various forms such as physical, verbal, or emotional assaults, emanates from patients, their families, or other individuals present within the hospital milieu. The repercussions of these acts extend beyond physical harm, permeating into HCWs' mental well-being and job performance [5]. HCWs may experience feelings of fear, anxiety, and helplessness in the face of such violence. [6,7] Such experiences can lead to burnout,

decreased job satisfaction, and absenteeism [6, 8, 9]. Furthermore, it can also lead to reduced patient safety and quality of care [6].

Work engagement for HCWs reflects a positive, satisfying, and energetic mental state experienced when deeply involved and enthusiastic about their work [10]. HCWs' job engagement is crucial as it directly influences healthcare services and quality of patient outcomes [6, 10]. When healthcare professionals are highly committed to their roles, they demonstrate deep dedication, enthusiasm, and positive energy towards their work [11]. This increased level of engagement is associated with higher job satisfaction, improved performance, and a desire to exceed above and beyond in patient care [10, 11]. HCWs are more likely to collaborate effectively with colleagues, communicate efficiently, and actively contribute to a positive workplace culture [12].

Significantly, high levels of work engagement serve as a buffer that prevents burnout and stress, contributing to HCWs' overall well-being [13]. In a demanding field like healthcare, where risks are high and challenges are constant, promoting work engagement becomes a cornerstone for maintaining a motivated, resilient, and effective workforce [14]. This situation contributes both to employee well-being and patient care.

The relationship between work engagement by HCWs and WPV is a complex and crucial aspect of the healthcare environment. WPV significantly undermines HCWs' engagement, affecting vitality, dedication, and focus [15]. Research demonstrates that WPV leads to reduced job satisfaction and performance, particularly impacting healthcare professionals, including nurses, who work in high-stress environments and show notably lower engagement levels when exposed to threats, harassment, or violence [16]. Specifically, psychological violence decreases engagement, vitality, dedication, and focus, with the organizational climate potentially influencing this effect [17]. However, a supportive organizational environment can help buffer these negative impacts, enabling HCWs to remain engaged despite challenging conditions. This underscores the importance of fostering a respectful and secure work environment to mitigate the adverse effects of WPV on the healthcare workforce [18]. WPV can negatively

impact HCWs' job engagement, reducing job satisfaction, performance, and the willingness to exceed above and beyond in patient care [19, 20]. Furthermore, WPV can make it challenging for HCWs to cope with burnout and stress, adversely affecting their overall well-being [6, 7]. In hospitals, the adverse effects of WPV on employees can lead to significant consequences that negatively impact the healthcare workforce. Therefore, WPV in hospitals is a phenomenon that requires detailed examination, especially regarding its outcomes on employees [21]. Our study aims to identify and describe the complex dynamics of WPV in the hospital setting, focusing on determining its role in affecting job engagement. In this context, the study seeks to answer the following research questions (RQ). **RQ 1:** What are the variables affecting WPV dynamics and job engagement among HCWs? **RQ 2:** To what extent do WPV dynamics impact job engagement among HCWs?

## 2. METHODS

### 2.1. Design

This study had a descriptive and prospective design. The survey method was used between June and September 2023 to collect data.

### 2.2. Ethical Considerations

An ethics committee approval was obtained from Health Science University Gazi Yaşargil Training and Research Hospital before the study started (March 03, 2023, Number 341). All stages of the study were conducted under the Declaration of Helsinki. Participant data were collected voluntarily by the hospital that conducted the study. Permissions were obtained from the hospital that conducted the study. After accepting the voluntary consent form, participants were informed about the research and included in it. Both online (electronic form) and face-to-face methods were used for data collection.

### 2.3. Study Population

Participants in the study were directly involved in patient care and treatment at the Training and

Research Hospital where the research took place. The participants included physicians, licensed health professionals (nurses, midwives, physiotherapists, psychologists, etc.), and health technicians (such as medical imaging and emergency medical technicians). Employees engaged in administrative and technical services were excluded from the study. A total of 3,256 employees fell under this restriction, but only 390 chose to volunteer for the study. A convenience sampling method was employed for sample selection. An assessment of the representativeness of this sample was conducted using Epi Info (Version: 7.2.4). An evaluation of the sampling was performed after the study, revealing a frequency of 76% in the sample evaluation, with a 97% Confidence Interval for the representativeness of the 390 samples ( $\alpha$ : 0.05).

## 2.4. Data Sources and Collection

The data were collected through the healthcare workers' information form, the Utrecht Work Engagement Scale (UWES), the Workplace Violence Scale (WVS), and Safety and Confidence Scale of Healthcare Professionals Against Violence prepared by the researchers.

### 2.4.1. Healthcare Workers' Information Form

A thoughtfully designed form was developed to collect data on the surveyed individuals' pertinent personal characteristics and occupational circumstances. This form comprised ten thoughtfully crafted questions designed to collect information about the individual attributes of employees, such as age, gender, and marital status. Furthermore, the questionnaire explored the working conditions experienced by respondents, including aspects like the number of shifts and hours they worked each month.

### 2.4.2. Utrecht Work Engagement Scale (UWES)

The scale, developed by Schaufeli et al. [22], measures healthcare workers' work engagement. The scale comprises three, six, and nine-item short forms. It has been reported in the Turkish version

of the scale that the three and six-item short forms exhibit superior structural validity than the nine-item form. Therefore, within the scope of this study, the six-item short form, validated and proven reliable in Turkish by Güler et al., was employed. Each of the three dimensions, Vigor (VI), Dedication (DE), and Absorption (AB), consists of two items, resulting in six statements. Each of these dimensions helps measure different aspects of an employee's engagement at work. Vigor refers to an employee who approaches work physically and mentally; dedication refers to finding work meaningful and valuable; and absorption refers to being completely focused on work, almost lost in it, without thinking about anything else. In this study, the Cronbach's Alpha reliability coefficient is 0.92 for the UWES total score, 0.90 for VI, and 0.93 for DE and AB. There is no cutoff point for evaluating both sub-dimension and total scale scores. Responses to the six Likert-scale questions, rated on a six-point scale, are interpreted so that higher scores indicate increased work engagement among healthcare workers [22].

### 2.4.3. Workplace Violence Scale (WVS)

The scale developed by Chen et al. [23] is designed to evaluate exposure to violence among healthcare workers. The Instrument for the Evaluation of WVS examines violence experienced by employees across three sub-dimensions: sexual (three questions), physical (four questions), and verbal (two questions), totaling nine items. The WVS assesses the level of violence exposure over the past year. Responses are given on a four-point Likert scale, with scores calculated for each sub-dimension by averaging responses, resulting in a score between 0 and 3. The overall WVS score, ranging from 0 to 9, is obtained by summing the three sub-dimensions, where a higher score indicates a greater frequency of violence exposure. The scale does not have any cutoff points. The Turkish validity and reliability study of the WVS was conducted by Tutan and Kökalan [24]. In our study, the Cronbach's Alpha reliability coefficient for the total WVS score is 0.871.

#### 2.4.4. Safety and Confidence Scale of Healthcare Professionals Against Violence

The scale was developed by Kowalenko et al. to determine the behavioral patterns exhibited by healthcare workers when subjected to violence and the resulting stress on HCWs [25]. This scale development study encompasses two separate scales: the four-item Confidence Scale (CS) and the three-item Safety Scale (SS). The Turkish reliability and validity study of the scale was conducted by Şengül et al. [26]. Each item on the scale is responded to on a ten-point Likert scale. In the Turkish validity and reliability study, Cronbach's Alpha reliability coefficient was 0.84 for CS and 0.80 for SS. In this study, the Cronbach's Alpha reliability coefficient is 0.81 for CS and 0.79 for SS. CS A high score on the SS indicates that the healthcare worker does not feel safe from violence. In contrast, a high score on the CS is interpreted as healthcare workers being inadequate at managing a potentially violent incident. There are no specific cut-off points for evaluating the scales [25, 26].

#### 2.5. Data Analysis

The data obtained from the study were transferred to and analyzed using the SPSS 23 software package. Descriptive statistical methods, including

frequency, percentage, arithmetic mean, and standard deviation, were employed in the data analysis. Skewness and Kurtosis values for the total scores of the scales obtained in the research fell within the range of -1.5 to +1.5, indicating a normal distribution of the data [27]. In addition, Histogram and Quantile-Quantile (Q-Q) graphs were evaluated using visual methods. Consequently, the normal distribution assumption was accepted. Independent samples t-test and one-way analysis of variance (ANOVA) were utilized to compare the descriptive characteristics of healthcare workers with the total scores of the scales. Multiple linear regression analysis assessed the impact of the WVS, SS, and CS total scores and working conditions on work engagement. Evaluations were conducted using total scores to address the issue of multicollinearity in the multiple linear regression analysis. To enhance the interpretability of the regression model, continuous and interpretable variables were included as independent variables. A p-value below 0.05 was considered significant in the test results.

### 3. RESULTS

Among 390 participants, the mean age was  $34.71 \pm 7.61$ , the mean working year was  $10.82 \pm 7.63$ , and the mean monthly working hours were  $10.82 \pm 7.63$  (Table 1). The mean number of reported

**Table 1.** Descriptive Data and Scales Regarding HCWs.

Variables (n:390)	$\bar{x} \pm S.D$	Min-Max	Skewness	Kurtosis
Age (years)	34.71±7.61	22-57	0.467	-0.515
Years of Employment	10.82±7.63	1-37	0.699	-0.129
Monthly Working Hours	189.08±33.04	150-360	1.349	1.441
SS	5.11±1.94	1-10	-0.015	-0.340
CS	6.08±2.43	1-10	-0.197	-0.622
WVS	3.85±1.05	0-9	-0.515	-0.625
UWES	21.02±7.45	6-36	0.030	-0.581
VI	6.42±2.72	2-12	0.162	-0.687
DE	6.67±2.93	2-12	0.180	-0.861
AB	7.92±2.83	2-12	-0.299	-0.711

SS: Safety Scale; CS: Confidence Scale; WVS: Workplace Violence Scale; UWES: Utrecht Work Engagement Scale; VI: Vigor Sub-dimension; DE: Dedication Sub-dimension; AB: Absorption Sub-dimension.

exposures to violence was  $3.85 \pm 1.05$  during the last six months (Table 1).

One hundred seventy-three participants were women, and 254 were married. All participants were healthcare workers, including 176 licensees (nurses, midwives, physiotherapists, dietitians, psychologists, etc.), 70 technicians (radiology, anesthesia, operating room, paramedic, etc.), and 144 physicians (Table 2).

As a result, males had a statistically significant higher mean CS (Confidence Scale) score than females ( $p < 0.05$ ), while females had a significantly higher mean AB score ( $p < 0.05$ ). Gender and other dependent variables did not differ significantly ( $p > 0.05$ ). Compared to single healthcare workers, married healthcare workers had significantly higher mean scores in CS and AB (Absorption Sub-dimension) ( $p < 0.05$ ). No significant differences in marital status were detected among other dependent variables ( $p > 0.05$ ).

Healthcare workers aged 30-39 scored significantly higher on the SS (Safety Scale) than those aged 40 and above ( $p < 0.05$ ). Workers aged 20-29 had higher CS and WVS (Workplace Violence Scale) scores than those aged 40 and above ( $p < 0.05$ ). Meanwhile, those aged 40 and above scored significantly higher on the DE (Dedication Sub-dimension) and the UWES (Utrecht Work Engagement Scale) compared to those aged 20-29 ( $p < 0.05$ ).

The mean CS scores of HCWs with high school graduates were significantly higher than those for postgraduate degree HCWs ( $p < 0.05$ ). High school graduates had significantly higher mean scores in AB and UWES compared to postgraduate degree holders and in DE scores compared to both undergraduate and postgraduate degree holders ( $p < 0.05$ ).

CS, VI (Vigor Sub-dimension), DE, AB, and UWES mean scores of health technicians and other workers were statistically significantly higher than those of nurses-midwives and physicians ( $p < 0.05$ ). Among the participants, HCWs with 0-9 years of experience reported a statistically significant increase in violence exposure in comparison to those with 20 years and above of experience ( $p < 0.05$ ). HCWs with 20 years and above experience had

significantly higher mean scores in VI (Vigor Sub-dimension), AB (Absorption Sub-dimension), and UWES (Utrecht Work Engagement Scale) than those with 0-9 years of experience ( $p < 0.05$ ).

HCWs working more than 200 hours and those working 11 or more shifts per month had higher mean WVS (Workplace Violence Scale) scores than those with 180 hours and below or those working regular hours, respectively ( $p < 0.05$ ).

HCWs in the emergency department had significantly higher mean WVS scores than those in diagnostic examination units and other units ( $p < 0.05$ ). HCWs in other units had higher mean VI, DE (Dedication Sub-dimension), and UWES scores than those in internal and surgical units ( $p < 0.05$ ). HCWs who perceived their workplace as providing sufficient support against WPV had statistically significantly higher mean scores in CS (Confidence Scale), WVS, VI, DE, and UWES compared to those who did not find the support sufficient ( $p < 0.05$ ).

The regression model conducted with continuous data related to WPV and working conditions among participating HCWs yielded significant results ( $F: 30.914, p: 0.000$ ). According to this outcome, the variables in the model explained 35.0% of the variance in work engagement among HCWs. Within the model, WVS ( $\beta: -0.473$ ), CS ( $\beta: -0.279$ ), and monthly average working hours ( $\beta: -0.091$ ) scores were identified as significant predictors of UWES.

#### 4. DISCUSSION

This study assessed healthcare workers' (HCWs) exposure to workplace violence (WPV), their ability to manage it, and their perceived safety. The findings suggest an association between WPV exposure, WPV management skills, working hours, and work engagement among HCWs (Table 4). Specifically, increased exposure to WPV is linked to reduced work engagement, supporting previous findings that workplace violence adversely affects engagement across various sectors [28, 29]. Given the significant levels of violence reported (Table 1), the negative impact of WPV on HCWs is unsurprising.

Increased exposure to WPV correlates with lower work engagement among HCWs (Table 4). Previous

Table 2. Comparison of Socio-Demographic Characteristics with Scale Score Averages. Values are reported as  $\bar{x} \pm S.D.$ 

Variables	SS	CS	WVS	VI	DE	AB	UWES
<b>Years of Employment</b>							
0-9 <sup>a</sup> (192)	5.30±1.91	5.89±2.38	3.98±.98	6.27±2.56	6.23±2.76	7.54±2.83	20.05±7.05
10-19 <sup>b</sup> (140)	4.87±1.92	6.30±2.38	3.76±1.07	6.38±2.89	6.82±3.07	8.02±2.92	21.22±7.94
≥20 (58)	5.06±2.07	6.15±2.72	3.60±1.13	7.01±2.75	7.77±2.85	8.94±2.37	23.74±6.92
<b>Test Values (t&amp;p)</b>	<b>1.995&amp;.137</b>	<b>1.159&amp;.315</b>	<b>3.812&amp;.023</b>	<b>1.682&amp;.187</b>	<b>6.618&amp;.001</b>	<b>5.690&amp;.004</b>	<b>5.654&amp;.004</b>
<b>Monthly Working Hours</b>							
≤180 <sup>a</sup> (176)	5.02±2.02	6.37±2.37	3.63±1.11	6.57±2.73	6.65±2.97	7.96±2.92	21.20±7.56
180-200 <sup>b</sup> (133)	5.12±1.86	5.97±2.47	3.93±1.01	6.62±2.85	6.84±3.10	7.96±2.78	21.42±7.90
≥200 <sup>c</sup> (81)	5.30±1.92	5.62±2.44	4.18±.85	5.76±2.36	6.43±2.53	7.77±2.76	19.97±6.35
<b>Test Values (t&amp;p)</b>	<b>.574 &amp;.565</b>	<b>2.363 &amp;.058</b>	<b>8.781 &amp;.000</b>	<b>3.052 &amp;.058</b>	<b>.495 &amp;.610</b>	<b>.138 &amp;.871</b>	<b>1.050 &amp;.351</b>
<b>Number of shifts</b>							
No Shift Work <sup>a</sup> (129)	4.89±2.07	6.15±2.53	3.63±1.10	6.68±2.78	7.06±3.01	8.38±2.79	22.14±7.52
1-5 <sup>b</sup> (46)	4.89±1.87	5.61±2.42	3.95±1.05	6.56±2.92	7.26±2.71	7.82±2.83	21.65±7.34
6-10 <sup>c</sup> (163)	5.32±1.76	6.02±2.35	3.90±1.04	6.36±2.54	6.24±2.74	7.55±2.69	20.16±7.08
≥11 <sup>d</sup> (52)	5.20±2.18	6.50±2.44	4.13±.84	5.82±2.89	6.51±3.30	8.03±3.27	20.38±8.26
<b>Test Values (F&amp;p)</b>	<b>1.488&amp;.237</b>	<b>1.121&amp;.340</b>	<b>3.414&amp;.018</b>	<b>1.313&amp;.270</b>	<b>2.640&amp;.051</b>	<b>2.140&amp;.094</b>	<b>1.948&amp;.121</b>
<b>Work unit</b>							
Emergency Dpr <sup>a</sup> (69)	5.09 ±1.78	6.29±2.12	4.05±1.04	6.76±2.67	6.97±2.87	8.07±2.56	21.81±7.18
Internal Units (111)	5.30±1.79	6.02±2.42	3.91±.97	5.85±2.59	6.22±2.84	7.36±2.94	19.45±7.35
Surgical Units <sup>b</sup> (103)	5.32±1.83	5.70±2.66	3.92±1.04	6.01±2.74	6.18±2.81	7.86±2.88	20.12±7.16
Diagnostic Units <sup>c</sup> (26)	5.01±2.48	5.39±2.18	3.84±1.00	6.80±2.56	6.84±2.80	8.19±2.89	21.84±7.24
Others (Admin.) <sup>d</sup> (81)	4.65±2.17	6.68±2.99	3.34±1.11	7.23±2.74	7.60±3.07	8.55±2.75	23.39±7.69
<b>Test Values (F&amp;p)</b>	<b>1.751&amp;.138</b>	<b>2.563&amp;.068</b>	<b>3.322&amp;.011</b>	<b>3.946&amp;.004</b>	<b>3.710&amp;.006</b>	<b>2.207&amp;.068</b>	<b>4.055&amp;.003</b>
ISAV*							
Presence(95)	5.23±2.00	6.73±2.07	3.45±1.00	7.05±2.79	7.37±3.09	8.30±2.97	22.72±8.18
Absence (295)	5.13±1.92	5.86±2.51	4.00±1.02	6.11±2.79	6.35±2.93	7.72±2.92	20.20±7.49
<b>Test Values (t&amp;p)</b>	<b>.398 &amp;.698</b>	<b>2.672 &amp;.008</b>	<b>-4.035&amp;.000</b>	<b>2.502 &amp;.013</b>	<b>2.540 &amp;.012</b>	<b>1.448 &amp;.199</b>	<b>2.460 &amp;.014</b>

t: Student's t Test for independent samples; F: One Way ANOVA; p: Significant Value SS: Safety Scale; CS: Confidence Scale; WVS: Workplace Violence Scale; UWES: Utrecht Work Engagement Scale; VI: Vigor Sub-dimension; DE: Dedication Sub-dimension; AB: Absorption Sub-dimension.

Table 3. Comparison of Working Conditions with Scale Score Averages.

Variables	SS x̄±S.D	CS x̄±S.D	WVS x̄±S.D	VI x̄±S.D	DE x̄±S.D	AB x̄±S.D	UWES x̄±S.D
<b>Gender</b>							
Female(173)	5.08 ± 2.02	5.78 ± 2.41	3.87 ± 1.02	6.69±2.62	6.70 ±3.05	8.23 ±2.85	21.64 ±7.54
Male(217)	5.14 ± 1.88	6.32 ±2.43	3.82 ±1.06	6.20 ±2.78	6.64 ±2.83	7.67±2.80	20.53 ± 7.36
<b>Test Values (t&amp;p)</b>	<b>.335&amp;.738</b>	<b>2.865&amp;.004</b>	<b>-933&amp;.351</b>	<b>.581&amp;1.562</b>	<b>1.077&amp;.282</b>	<b>2.330&amp;.020</b>	<b>1.521&amp;.129</b>
<b>Marital Status</b>							
Married(254)	5.15 ± 1.98	6.34 ± 2.42	3.81± 1.067	6.48 ± 2.80	6.79 ± 3.00	8.16 ± 2.87	21.44 ± 7.56
Single(136)	5.05 ± 1.87	5.60 ± 2.39	3.91 ±1.18	6.31 ± 2.55	6.45 ± 2.79	7.47 ± 2.72	20.24± 7.19
<b>Test Values (t&amp;p)</b>	<b>.475 &amp; .635</b>	<b>2.865 &amp; .004</b>	<b>458 &amp; .647</b>	<b>.581 &amp; .562</b>	<b>1.077&amp;.282</b>	<b>2.330&amp;.020</b>	<b>1.521 &amp; .129</b>
<b>Age Groups (years)</b>							
20-29 <sup>a</sup> (115)	5.07 ± 1.87	5.57 ± 2.28	4.01± 0.99	6.27 ± 2.57	5.97 ± 2.88	7.50 ± 2.83	19.75± 7.12
30-39 <sup>b</sup> (160)	5.40 ± 1.96	6.38 ± 2.29	3.86 ±1.01	6.32 ± 2.65	6.66 ± 2.67	7.93 ± 2.79	20.92 ± 7.03
≥40 <sup>c</sup> (115)	4.75 ± 1.94	6.16 ± 2.70	3.66 ± 1.12	6.73 ± 2.93	7.40 ± 3.15	8.32 ± 2.87	22.46 ± 8.13
<b>Test Values (F&amp;p)</b>	<b>3.776&amp;.024</b>	<b>3.816&amp;.023</b>	<b>3.776&amp;.024 a&gt;b</b>	<b>1.054&amp;.350</b>	<b>7.075&amp;.001</b>	<b>2.362 &amp; .096</b>	<b>3.881&amp;.021</b>
	<b>b&gt;c</b>	<b>b&gt;a</b>			<b>c&gt;a</b>		<b>c&gt;a</b>
<b>Education</b>							
High School <sup>a</sup> (22)	4.24 ± 2.56	7.29 ±2.19	3.59 ±0.90	7.31 ±2.69	8.36 ± 3.57	9.13 ± 2.88	24.84 ± 8.12
Associate Degree <sup>b</sup> (52)	5.16 ±2.58	6.54 ±2.20	3.82 ±1.07	6.88 ±3.00	7.05 ± 3.12	8.48 ± 2.97	22.42 ± 7.87
Undergraduate Degree <sup>c</sup> (183)	5.11 ±1.84	6.04 ± 2.43	3.87 ± 1.05	6.37 ±2.73	6.49 ± 2.95	7.89 ± 2.80	20.76 ± 7.40
Postgraduate <sup>d</sup> (133)	5.25 ±1.64	5.75 ± 2.50	3.87 ±1.05	6.16 ±2.56	6.49 ± 2.61	7.54 ± 2.76	20.21 ± 7.05
<b>Test Values (F&amp;p)</b>	<b>1.707 &amp; .165</b>	<b>3.299 &amp; .020 a&gt;d</b>	<b>.505 &amp; .679</b>	<b>1.717&amp;.163</b>	<b>3.184 &amp; .024</b>	<b>2.825 &amp; .039</b>	<b>3.165 &amp; .025</b>
					<b>a&gt;c,d</b>	<b>a&gt;d</b>	<b>a&gt;d</b>
<b>Occupation</b>							
M.D. <sup>a</sup> (144)	5.32 ± 1.56	5.50 ± 2.38	3.88 ±1.03	6.11 ±2.33	6.36 ± 2.54	7.44 ± 2.57	19.93 ±6.50
Nurse, Midwife <sup>b</sup> (176)	5.11 ± 1.87	6.17 ± 2.34	3.92 ± 1.03	6.31± 2.89	6.39 ± 3.00	7.82 ± 2.93	20.53 ± 7.85
Technician <sup>c</sup> (70)	4.70 ± 2.66	7.04 ± 2.47	3.60 ± 1.09	7.34 ± 2.86	8.00 ± 3.14	9.17 ± 2.78	24.51 ± 7.32
<b>Test Values (F&amp;p)</b>	<b>2.347 &amp; .097</b>	<b>10.096&amp;.000</b>	<b>2.495 &amp; .084</b>	<b>5.158 &amp; .006</b>	<b>9.088 &amp; .000</b>	<b>9.309 &amp; .000</b>	<b>10.051&amp;.000</b>
		<b>c&gt;a,b</b>		<b>c&gt;a,b</b>	<b>c&gt;a,b</b>	<b>c&gt;a,b</b>	<b>c&gt;a,b</b>

t: Independent Simple t Test; F: One Way ANOVA; p: Significant Value; SS: Safety Scale; CS: Confidence Scale; WVS: Workplace Violence Scale; UWES: Utrecht Work Engagement Scale; VI: Vigor Sub-dimension; AB: Absorption Sub-dimension.

**Table 4.** Determining Predictors of Work Engagement in Healthcare Workers.

Variables	$\beta$	t	P
CS	<b>.279</b>	<b>6.556</b>	<b>.000</b>
SS	-.002	-.052	.958
WVS	<b>-.473</b>	<b>-10.669</b>	<b>.000</b>
Age	.050	.461	.645
Years of Employment	.026	.238	.812
Monthly Working Hours	<b>-.091</b>	<b>2.065</b>	<b>.040</b>
Monthly Average Number of Shifts	-.043	-.978	.329

*R: 0.362 R<sup>2</sup>: 0.350 F: 30.914 p:0.000 Durbin Watson:1.861*  
*SS: Safety Scale; CS: Confidence Scale; WVS: Workplace*  
*Violence Scale; UWES: Utrecht Work Engagement Scale;*  
*VI: Vigor Sub-dimension; DE: Dedication Sub-dimension;*  
*AB: Absorption Sub-dimension.*

studies in various sectors, including healthcare, have found similar relationships between adverse workplace conditions and decreased engagement [19, 20, 28, 29]. However, it is also possible that workers with lower engagement may face higher WPV exposure, as reduced engagement could impact work quality and interactions with patients and visitors, potentially increasing the risk of conflict and violence.

According to the regression model, the level of exposure to workplace violence (WPV) was the variable with the highest beta coefficient, negatively impacting work engagement among healthcare workers (HCWs) (Table 4). This situation crucially illustrates the destructive effect of WPV exposure on work engagement. Behavioral and psychosocial problems are known to arise in HCWs who experience WPV [30]. A systematic review reported that violence exposure among HCWs leads to numerous issues affecting both psychological and physical health, including burnout, anxiety, stress, anger, and diminished trust [6]. These issues contribute to a complex interplay of factors where WPV can amplify existing stressors, potentially accelerating burnout—often viewed as the opposite of work engagement [31, 32]. WPV appears to be strongly associated with reduced work engagement and may add to other psychosocial risks among healthcare workers. The potential direct and indirect effects of

WPV highlight its significance as an important factor affecting work engagement.

The WPV that has assumed global pandemic status among HCWs can lead to significant individual and organizational consequences [33, 34]. The adverse effects on employee health negatively impact work performance and hinder healthcare services delivery [35]. As far as these aspects are concerned, WPV continues to undermine healthcare systems [36]. Therefore, a systematic approach to addressing risk factors in combating WPV among HCWs is essential [37]. Consistent with the literature, this study identifies risk factors for WPV exposure, such as working in the ED, young age, lack of experience, and night shifts with heavy workloads [37–39]. Solving the problem requires specific organizational measures to address these risk factors. However, it is noteworthy that young and inexperienced HCWs and those working in EDs also tend to have lower work engagement (Table 2). The coexistence of WPV and low work engagement among these HCWs highlights the potential causal relationship between the two. Furthermore, the findings related to young HCWs are particularly significant, as they underscore a potential threat to the future of the healthcare workforce.

HCWs demonstrating WPV management capability exhibited higher work engagement levels (Table 4). The healthcare sector is identified as one of the most common settings for WPV (WHO 2002), and in this respect, it is considered one of the riskiest work environments [40]. Especially in high-risk units such as emergency and psychiatry, WPV has become almost routine for those directly involved in patient care [6, 41]. In the healthcare sector, the source of WPV is often the patient or their family members, who directly receive the service [7, 42]. Therefore, implementing primary prevention methods, such as eliminating WPV among HCWs, may not always be feasible. Secondary prevention methods, such as managing violent incidents and employing effective communication, can be crucial to mitigating violence's effects. Indeed, a systematic review has demonstrated that developing violence management skills, including appropriate communication and tension reduction, can minimize the impact of WPV [43]. Our findings support the



idea that HCWs can mitigate negative outcomes by developing skills in managing WPV. One of the study's most relevant findings is that skills in managing WPV can support work engagement among HCWs.

According to the study findings, younger HCWs exhibit a lower average score in managing WPV than their older counterparts (Table 2). In this regard, it can be observed that, similar to exposure to WPV, younger HCWs are more threatened by their ability to manage WPV. In addition to being young, another prominent risk factor in managing violence is the gender of HCWs. The lower average score in the ability to manage violence for female HCWs is significant in the healthcare sector, where female labor is predominant (Table 2). Female HCWs may experience gender discrimination and harassment from patients at work [44]. Especially considering the societal gender roles that work against women in the professional environment, [45] specific measures need to be taken for female and young employees among HCWs in terms of skills in managing WPV.

The study also found that working hours are a significant predictor of work engagement. Healthcare workers' increase in working hours reduces work engagement (Table 4). The adverse effects of overwork were most acutely felt during the recent COVID-19 pandemic. Research conducted during this period indicates that overwork threatens HCW health in various ways [46]. In general, increasing working hours among HCWs plays a mediating role, contributing to increased burnout and decreased work engagement [13]. A negative impact of overwork on work engagement is also reported by research in other sectors [47]. Literature evidence supports our finding (Table 2) that HCWs who work more than 200 hours have significantly lower VI (Table 2). Our study also found that overtime and extra shifts increase WPV (Table 2). In addition to the known adverse effects of overwork, our findings suggest that it may reduce work engagement by increasing WPV exposure.

In the study, physicians and nurses had lower total and subdimension scores for UWES (VI, DE, AB) than other healthcare workers (Table 2). In recent years, the emigration of Turkish physicians has become a prominent issue, with workplace violence

(WPV) believed to have a significant impact on this trend [48]. The emigration of nurses from Turkey is also notable, though it receives less coverage in the media and literature [49]. One of the primary reasons employees leave their jobs is a decline in work engagement [50]. The study found that healthcare workers with higher education levels (postgraduate graduates) exhibited weaker skills in managing violence and lower work engagement (Table 3). These findings indicate that exposure to WPV may contribute to the emigration of Turkey's qualified healthcare workforce; however, more evidence is needed to confirm this hypothesis.

Institutional support against violence enhances the skills of healthcare workers (HCWs) in handling violence and fosters higher levels of work engagement (UWES). Consistent with these findings, participants who reported receiving sufficient institutional support experienced lower exposure to violence (Table 3). Social and institutional supports are vital in preventing the negative consequences of violence among HCWs [9]. In this context, developing and implementing institutional policies to address workplace violence (WPV) in health facilities is necessary.

#### 4.1. Strengths and Limitations

The research was conducted at a tertiary hospital. Different violence dynamics may exist in secondary and primary healthcare institutions. Further, as the study HCW participants were those who voluntarily chose to participate. This situations may limit the generalization of the results to all HCWs. The study could affect data accuracy due to participants' recollections. The study data were collected within a specific time frame. This provided limited information on how WPV impacts job commitment changes in the long term. Additionally, the fact that the study was conducted at a single center may moderately affect the results based on cultural and societal changes. WPV exposure assessment was based on HCWs' expressions. HCWs were reluctant to discuss their WPV exposure, leading to significant data loss. Moreover, convenience sampling was used in the study, which limited its inclusion of subgroups such as gender.

## 5. CONCLUSION

This study highlights the significant association between workplace violence (WPV) exposure, WPV management skills, working hours, and work engagement among healthcare workers (HCWs). The findings underscore that increased exposure to WPV and inadequate management skills are key factors potentially diminishing work engagement and contributing to adverse psychosocial outcomes. Furthermore, the data suggest that extended working hours may also play a role in reducing engagement by amplifying stress and increasing WPV exposure.

Notably, WPV management skills emerge as a critical component for supporting HCWs' engagement and resilience in high-risk environments. This underscores the importance of equipping HCWs with practical skills for managing WPV, which may not only improve their engagement but also mitigate the negative effects of violence in healthcare settings. Addressing these issues through institutional policies and support systems is essential to fostering a safer, more supportive work environment for HCWs.

In sum, while the study's cross-sectional design limits causal conclusions, the findings indicate that WPV and related workplace conditions warrant priority attention in efforts to support HCW engagement and well-being. Future research, particularly longitudinal studies, is essential for clarifying these relationships and informing interventions that can enhance healthcare work environments.

**INSTITUTIONAL REVIEW BOARD STATEMENT:** The study was conducted according to the guidelines of the Declaration of Helsinki. An ethics committee approval was obtained from Health Science University Gazi Yaşargil Training and Research Hospital before the study started (March 03, 2023, Number 341).

**INFORMED CONSENT STATEMENT:** Informed consent was obtained from all subjects involved in the study.

**DECLARATION OF INTEREST:** The authors declare no conflict of interest.

**AUTHOR CONTRIBUTION STATEMENT:** H.B and M.Ö designed and implemented the study together. The results were

analysed and reported by H.B. The final version of the manuscript was prepared jointly by H.B and M.Ö to the analysis of the results.

**DECLARATION ON THE USE OF AI:** None.

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