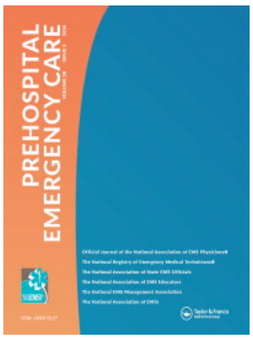

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Impact of Workplace Violence against Emergency Medical Services (EMS)

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ABSTRACT

OBJECTIVES: The objectives of this study were to: (1) understand the personal impact of workplace violence (WPV) on staff within a large multistate emergency medical services (EMS) agency, (2) describe the impact of WPV on subsequent patient interactions, examining how experiences of violence affect the quality of care provided by EMS clinicians, (3) examine the influence of WPV on perceived workplace safety among prehospital personnel and its correlation with retention in the EMS field, and (4) solicit recommendations from staff for the prevention and mitigation of WPV in the future.

METHODS: We conducted virtual focus groups and individual interviews with 22 prehospital personnel using a descriptive qualitative design within a large multistate Midwest EMS agency between 4/5/2023-6/20/2023. Data were analyzed using Thematic Analysis to identify common perceptions among and across participants.

RESULTS: Major themes of personal impact; impact on patient interactions; influence of WPV on career longevity/sustainability; and relationship between EMS culture and WPV were identified. Overall, participants shared the perception that WPV is "part of the job", and that verbal abuse was so common that they hadn't previously considered it as violence. Participants provided several examples of WPV and described how these experiences impacted them personally (e.g. hypervigilance) and impacted their subsequent interaction with patients (e.g. quicker to use restraints, loss of empathy). Participants shared the perception that EMS is no longer valued or respected by patients or communities. Several voiced concerns for the next generation of colleagues and nearly all participants reported the need for education and training in situational awareness, de-escalation, and self-defense tactics. Participants referenced desire for more coordination and communication with law enforcement, change in culture of abuse from patients without repercussions, and improved agency mental health support and peer

support/mentoring following a violent event. Despite experiences with WPV, the majority reported plans to remain in EMS.

CONCLUSIONS: Emergency Medical Services personnel are commonly traumatized by violence in their work and non-physical violence is underappreciated. Despite its impact on staff and subsequent patient interactions, most participants reported plans to remain within EMS. Multi-faceted system-focused efforts are needed to shift toward and support a zero-tolerance culture for WPV.

Key words: workplace violence, occupational safety, emergency medical services, EMS, prehospital clinicians, prehospital personnel, verbal abuse, physical assault

INTRODUCTION

Health care workers experience high rates of injuries caused by workplace violence (WPV), defined by the Joint Commission as "an act or threat occurring at the workplace that can include verbal, nonverbal, written or physical aggression; threatening, intimidating, harassing, or humiliating words or actions; bullying; sabotage; sexual harassment; physical assaults; or other behaviors of concern involving staff, licensed practitioners, patients or visitors (1, 2)." Hospital-based violence has been receiving increasing attention (1-6), and further attention is needed regarding violence experienced by staff working in the prehospital field of emergency medical services (EMS). The EMS profession is recognized as one of the most dangerous (6-10). Prehospital clinicians are exposed to violent situations in the field and in the homes of patients with far fewer resources and personnel to mitigate it (11, 12). In the United States, the occupational fatality rates and nonfatal injury rates for EMS personnel are far above the average for all workers (6) and EMS clinicians consider violence to be a significant cause of stress on the job (13). This warrants particular emphasis as stress and lack of appreciation from the public have been cited as two of the top factors for a critically shrinking EMS workforce (14).

We sought to establish the impact and experience of WPV on prehospital personnel within a large Midwest multistate agency in order to inform the development of targeted interventions to improve staff safety and retention. The objectives of this study were to: (1) examine and understand the personal impact of WPV on staff within a large multistate EMS agency, including the psychological, emotional, and physical effects experienced by staff members, (2) describe the impact of WPV on subsequent patient interactions in the prehospital setting, examining how experiences of violence affect the quality of care provided by EMS clinicians, (3) examine the influence of WPV on perceived workplace safety among prehospital personnel and its correlation with retention in the EMS field, exploring the role of WPV as a factor in decision to continue or leave EMS careers and (4) solicit recommendations from staff

for the prevention and mitigation of WPV in the future, aiming to gather insights and strategies directly from those who experience and confront violence in the EMS setting.

METHODS

For this study we conducted semi-structured focus groups and individual interviews with prehospital personnel using a descriptive qualitative design (15). The Mayo Clinic Institutional Review Board reviewed and approved this study (IRB #23-000746).

Study setting

This study took place within a large multistate health system-affiliated EMS agency encompassing 15 sites across the Midwest with approximately 415 ground-based staff (134 EMTs and 281 paramedics) employed at time of study. The agency has 122,000 average annual dispatches for ground-based EMS service, including 96,000 calls to 9-1-1 and 26,000 interfacility transport requests. Agency sites encompass both rural/urban settings and are involved in both 9-1-1 and interfacility transports.

Study sample and recruiting procedure

The researchers invited all EMS staff via email to participate in virtual focus groups regarding WPV with the Joint Commission definition provided in the recruitment email (2). Interested staff were directed to sign up through an online form [Qualtrics], where they provided basic demographic information and self-reported experience with WPV. Thirty-four agency staff indicated interest in study participation through the initial Qualtrics survey signup. A purposive sampling strategy (16) was used to specifically select prehospital participants whose primary role was that of a frontline crew member with previous WPV experience. Efforts were also made to incorporate diverse perspectives and ensure representation by gender, race, geographic region, and shift type. EMS agency leadership were excluded from the study

to encourage open dialogue amongst participants. We anticipated that thematic saturation could be achieved within 3-5 focus groups with 5-8 participants per group, or among 15-32 participants (17, 18). A participant oral consent script was shared ahead of each interview, which explained the purpose of the study, the voluntary nature of participating and the role of the researcher. Focus groups were scheduled surrounding participant availability. Individual interviews were offered to interested staff who could not attend a focus group session due to scheduling conflicts. Participants were provided remuneration by the EMS agency with their hourly wage.

Data collection procedure

Focus groups and individual interview sessions were held virtually over Zoom videoconference (Zoom Video Communications, Inc., San Jose, CA) between 4/5/2023-6/20/2023. The focus groups had 2 to 6 participants and lasted approximately 60 minutes. All focus groups and interviews were audio recorded and transcribed verbatim for analysis. Verbal consent was obtained at the start of each interview and focus group, which were moderated by M.L., a Health Services Researcher with expertise in qualitative methods, and O.S., a Health Services Analyst with training in qualitative research. There was no previous relationship between the qualitative team members and the participants. Both were introduced as external members of the research team whose objectives were to create a safe environment to share experiences and protect participant confidentiality.

Broad topic areas were used to explore the research questions for this study: The participants were asked about [1] Their general perceptions of WPV with respect to their role in EMS, [2] the impact of WPV on their career outlook, the way they interact with patients, and their personal lives, and [3] suggested strategies for prevention and mitigation of WPV. See supplemental material for copies of the focus group and interview guides. Participants were not asked to review transcripts for accuracy before

analysis, although this would have been available upon request. Participants were provided with a list of institutional mental health resources and internal resources related to WPV at the conclusion of their session.

Data analysis

The focus group and interview transcripts were imported into a qualitative data analysis program NVIVO (Lumivero, LLC, Denver, CO) where they were reviewed and coded by M.L. and O.S. An integrated approach (19) was used to develop a code structure that included both deductive codes, aligned with interview question domains and concepts, and inductive codes, that emerged during the initial line by line review of a subset of transcripts. Using Thematic Analysis, each transcript was independently reviewed and coded by M.L and O.L. Throughout the coding stage, an iterative process was used to ensure a shared understanding of the code definitions and consensus between coders regarding code application. Coded segments were then grouped and reviewed by code to identify common perceptions and patterns between and among participants. Interpretive insights were also captured through memos as part of the analysis process. Thematic saturation was achieved after the four focus groups. While few new codes emerged beyond this point, each individual interview added to the richness of the data through detailed examples that supported and expanded upon each topic, which allowed for a deeper understanding. Furthermore, conducting both focus groups and interviews provided the opportunity to triangulate perceptions across both formats and confirmed the presence of key themes within both.

RESULTS

Participants

We conducted a total of 4 focus groups which comprised 17 participants in total and an additional 5 individual interviews for a total of 22 study participants. Demographics of the study participants and other characteristics reported through the initial intake form are summarized in Table 1. The study cohort primarily consisted of paramedics and was equally balanced between males and females.

Overview of findings

Overall, participants shared the perception that WPV is "part of the job" – some were even told this during their training. Many felt that there is a shift in their community and patient population no longer respecting EMS and they referenced an increasing amount of violence over the last couple of years. The majority of participants (N = 20; 90.9%) indicated experiencing verbal abuse in the preceding 6 months and 7 (31.8%) indicated experiencing physical assault in the same time period. Participants reported that the majority of WPV is perpetrated by patients, but occasionally it is perpetrated by others to include bystanders on-scene, law enforcement, hospital staff, and coworkers. Major themes of personal impact; impact on patient interactions; influence of WPV on career longevity/sustainability; the relationship between EMS culture ("the way things are done") (20) and WPV; and recommended prevention and mitigation strategies were identified. These themes are presented and discussed below and supported with quotes in the text as well as summarized in Table 2.

Personal impact

Many participants mentioned how the job has changed them and some referenced signs of post-traumatic stress (21) such as hypervigilance, trouble sleeping, distrust of others, anxiety, fear, flashbacks to violent events when passing a scene, and mood instability. Many acknowledged that these impacts

were tied to their experiences with WPV but also pointed to the nature of the job and the regular exposure to trauma and high-stress situations.

> *"I had nightmares for a while… when in public, I startle when I'm touched by somebody that I don't see coming."* (P2)

Other examples of personal impact included concerns about safety while at work or in public, ruminating over verbal statements made by patients, and need for personal time to process. Participants mentioned that WPV affects their home life by making it difficult to leave the events of the workday at work. Some reported a decreased level of happiness and being quick to act or read too much into situations at home as a direct result of their experiences. Some also indicated feeling changed and that the way they see the world has been altered.

> *"My head is always on a swivel. I'm always looking for somebody that's going to attack me, somebody that has a weapon, somebody that's going to come after my family or I if we're out in public."* (P12)

> *"It's taught me where I really don't trust anybody."* (P6)

In terms of diversity of impact, minority participants shared personal stories of racially charged comments to highlight the particular impact WPV has had on them.

> *"I'm an African American – I've had a lot of racially charged comments. I have been called a 'nigger' a lot of times by patients, drunk ones, and also racially aggressive white males a lot*

too… But there's been times when I've also been spoken to in a manner that like they won't let me treat them. And I've had at least one in a racially motivated manner; he – and pardon, the language, is going to be significant here that, 'I don't want no fuckin' niggers touching me.' And I say, 'I'm the only one who's a paramedic here that can help you.' And he put his hand out and pushed me in the chest to push me away, and I'm like, 'You know what? I'm out of here.' And I've had people threaten to come – 'I'm going to come find you and kill your family and kill you'..." (P4)

Likewise, female participants shared their own personal stories of gender-specific challenges in the field as they relate to WPV.

"Sexual harassment, I think that I deal with more of that, and that is harder to deal with because I'm being put down because I'm a girl... I want to look nice when I come to work. But at the same time, I don't want to give the impression that it's okay for patients to say things to me... So, I think that's definitely something that's hard for me to deal with. It doesn't really change things I do, but it does make situations uncomfortable." (P11)

A few male participants also acknowledged a perception that in some instances WPV may be particularly more severe when targeted towards female EMS staff.

"I think the verbal stuff towards women is worse than it is to men… I have had female partners that have been spoken to way different than I have been." (P10)

Impact on patient interactions

Experience with WPV has led to increased situational awareness at work. Participants indicated needing to know where the exits are on-scene and listening to other conversations around them. They expressed being slower to trust and quicker to consider or use agitation medications and/or physical restraints on patients in subsequent encounters. Additionally, participants indicated they have modified their own clinical practice, such as changing their position in the ambulance or making sure patients are searched for possible weapons before transport.

> *"It makes you more standoffish with patients. It makes it a little bit harder to connect to them, because now I am looking for something else. I'm holding myself back so that I don't end up in that same situation."* (P20)

Several participants indicated their approach is now more direct, they show less empathy, and they are quicker to set boundaries now secondary to WPV they have experienced.

> *"The physical aggression definitely has changed how I do things on scene. Like verbal threats, they set me on edge a little bit. But any time that someone starts to get mildly physical, I change my situation. I'm more prone to backing out of a scene or involving [police] quicker in a call, based on previous experiences rather than before when I just approached every patient like they were the happy patient."* (P7)

Career longevity/sustainability

Despite its significant personal impact and impact on patient interactions, most indicated WPV has not impacted their overall job satisfaction or caused them to consider leaving EMS.

> *"It hasn't changed the way I feel. I mean I love doing what I do. And not that I'm accepting that violence is going to happen or anything like that, but it hasn't really affected my desire to continue to do this job, to continue to be better at doing what I do and continue learning and growing."* (P1)

Some questioned whether it is all worth it if they can make more money in another position that is safer and less stressful. Participants noted WPV is only one factor and that there are many stressors of the job that they have to overcome. Dealing with these constant stressors is mentally taxing and leads to burnout.

> *"It's taxing, and it takes a toll on you, a lot more mentally than anything, and the late calls and whatnot. And it's not necessarily just the violence. It's all of the other aspects that play a role [in] our job. The baby-not-breathing call, the 25-year-old that goes into cardiac arrest – it takes a toll on you after a while. And I do my best not to bring it home, but some days it's hard not to. As much as I love helping and being there for people, I don't think that this is going to be a 10-, 15-20-year career for me, unfortunately."* (P12)

Participants referenced concerns over personal liability when dealing with agitated/violent patients. A common recurring theme included concern for the next generation of EMS colleagues because of the public's lack of respect for EMS and worry that increasing WPV experienced on the job will lead to burnout for newer staff as these stressors accumulate. For many participants, their job in EMS has not been what they expected, in terms of wanting to make a difference when they entered EMS and at this point in time, feeling like they cannot make a difference in their current role.

"I don't think a lot of team members know how to do [verbal or physical de-escalation] or are willing to because it puts them at a higher risk of litigation or something like that, but we have to keep ourselves safe. We have to be able to go home." (P18)

Relationship between EMS culture and WPV

Participants acknowledged that they see people at their worst when emotions are running high. They often deal with patients in an altered mental state—whether from behavioral health issues or substance use—because of this, they feel they are more prone to situations of WPV. Some more seasoned crewmembers indicated that they have become so used to WPV that they do not act on or report verbal abuse in the absence of a physical assault.

"…I think many of us just kind of said, 'well, that's kind of part of the job. You just deal with it, and you move on.'" (P1)

There was sentiment expressed by some that prior to being provided the Joint Commission definition of WPV[2] for the purpose of the study, they had never considered verbal abuse a part of WPV. Additionally, some participants indicated they might consider underlying patient and/or disease factors as an excuse for violent behavior experienced in the field.

"I think, from my experience, a lot of it is just threatening [behavior], for the most part. There's been maybe three cases where it's been a physical assault. But a lot of times, I think I can relate some of that back to the patient's condition. I don't think they realize their actions if that makes any sense. I don't want to justify their actions. But yeah, I think most of them, for me, has been

just threatening things like, 'I'm going to kill you. If you do that again, I'm going to beat your head in.' And then, occasionally, patients just grabbing staff members or myself." (P5)

Concerningly, participants do not feel valued by the public in their role within prehospital medicine. Many felt there is a shift in the patient population no longer respecting EMS. They referenced an increasing amount of violence, especially over the last couple of years.

"People are more likely to strike out at us now than they used to be. So, I mean you can probably see a lot of the verbal aggression probably more than the physical aggression, although the physical aggression has increased as well." (P10)

Future WPV prevention and mitigation

Nearly all participants reported the need for WPV education and training and believed both would be highly beneficial. Particular topics identified included situational awareness, verbal and physical de-escalation, and self-defense tactics. Some participants indicated interest in education regarding legal aspects, such as guidance on appropriate timing and use of self-defense tactics. Participants also expressed interest in specific education regarding patient encounters perceived to be at higher risk of violence (e.g. encounters involving substance use/intoxication). Several participants noted they are concerned for the next generation of EMS clinicians – they feel the new generation is naïve to violence that is occurring and unprepared to handle it. Participants felt strongly that more needs to be done to prepare new graduates before going into the field.

"I worry about some of the young kids today that come out of the schools, … I was green once too, but I had great mentors that brought me along. And I try to return that favor, but I don't

remember coming out of school so naïve in a way that I see a lot of the young kids coming out today, expecting that, 'I'm here to help people, and everybody's going to want my help.' Well, that's not the case." (P5)

"I have no problem saying to a patient, 'You need to not grab me. You need to keep your hands to yourself. You need to talk appropriately to me because I'm a professional working in the ambulance, and I'm trying to give you care.' And then, just laying very distinct ground rules with my patients and then trying to help new young paramedics know that they can lay those lines down." (P17)

Participants reported differences in practice and perceptions regarding when to use physical restraints and sedation. Recent controversies regarding sedation use in the prehospital setting were referenced (22). One participant suggested offering pre-filled syringes of sedative agents to reduce medication error and allow for quicker administration with a severely agitated/violent patient. Participants referenced alert buttons in the field and a concern that these are more reactive than proactive and have the potential to escalate a situation by alerting the patient. A recommendation was made to develop a more passive alert system. Recent implementation of ballistic vests within the agency was referenced as a tangible sign of a proactive solution, however brought up additional concerns:

"We get no training, none, zero, and it's something I've brought up multiple times that the vests that we have now [are] just a small part of a solution of protection, but it can also be a false sense of protection that that's going to stop the threat." (P8)

"…if you're relying on your vest, things have already gone way too wrong way too fast." (P6)

Participants also referenced concerns regarding the agency's newer ambulance design in which the crew member sits beside the patient, rather behind the patient's head:

> *"If I'm sitting at the computer area alongside of the patient in a new ambulance, I have to move toward the patient to be able to exit the vehicle … if someone really wanted to hurt you, you'd have no way to flee unless you were able to overpower [the individual] to exit…"* (P18)

Additionally, participants referenced desire for more coordination/communication with law enforcement, change in community culture of disrespect from patients who are perceived to be violent without any repercussions, and improved agency mental health support and peer support/mentoring following a violent event.

> *"For the longevity of the career, I feel like we need to address more of the mental health stuff and coping and figuring out how to move on from events because it's hard. And whether they're minor things or big, catastrophic events, we don't have the tools of how to process the things that we're experiencing and the negative things against us."* (P11)

DISCUSSION

The narratives of participating EMS personnel in this study show common themes related to experiences with prehospital workplace violence and recommended future prevention and mitigation strategies. Participants expressed that WPV is one of many significant cumulative stressors they are exposed to regularly that leads to significant impact on personal and home/family lives. Similar to existing literature from the emergency department setting (23), this study demonstrates violent encounters negatively impact future patient interactions amongst EMS staff victims, emphasizing WPV is a larger systems issue than just patient-on-staff violence in one singular encounter.

As the field of EMS seeks to expand the diversity of its workforce and its diversity, equity, and inclusion (DEI) recruitment efforts (24), it is important to understand the individual perspectives of staff on the frontlines describing racially or sexually charged comments from patients. As discussed by our participants, EMS (and health care) culture has historically overlooked verbal abuse from patients; however, there has been a recent paradigm in health care with a push for institutions and agencies to demonstrate they are zero-tolerance workplaces when it comes to violence against staff (25). It is necessary to recognize racial, gender, and sexual harassment as particular types of WPV that equally deserve no place within the workplace due to their significant impact on staff of diverse backgrounds.

Interestingly, we found that despite the diverse and significant impact of WPV on EMS staff, most indicated it has not influenced their overall job satisfaction or caused them to consider leaving the field of EMS. This consensus amongst our participants may indicate resiliency amongst EMS staff or it may emphasize the consistent theme expressed by participants, and documented previously in the literature, that WPV is just one of many stressors of the job—stressors that are mentally taxing and collectively lead to EMS clinician burnout (26-34). Future research is needed to better determine how influential

WPV is amongst these many stressors in the prehospital environment and on the critical staffing shortage currently impacting the EMS profession (35).

Concerningly, we found that participants do not feel valued by the public in their role within prehospital medicine. Many felt there is a shift in the population no longer respecting EMS and staff perceive an increasing amount of violence, especially over the last couple of years. This sentiment reflects anecdotal reports in the grey literature (35) and established data that has demonstrated an increasing prevalence of WPV in health care since the start of the COVID19 pandemic (36). While there has been a recent push for health care institutions to develop WPV prevention strategies to meet new requirements established by the Joint Commission (37), few, if any, interventions have been translated into the prehospital setting for hospital-affiliated EMS agencies. Among non-hospital-affiliated EMS agencies that lack institutional resources to prevent, mitigate, and respond to violent patient encounters, even more attention to this issue is urgently needed, particularly amongst those with longer transport times resulting in more time providing direct patient care and thus, increased risk of violence experienced (38).

Given the complexity and pervasiveness of the issue of WPV that has for too long been deeply rooted in all facets of health care, including EMS, prevention and mitigation efforts will need to equally be complex and systems focused. Based on participants' responses and recommendations, efforts should first begin with redirecting EMS culture to recognize that WPV, including verbal abuse, should not be considered an expected part of the job. Targeted efforts should be made to educate and train staff in on-scene situational awareness and de-escalation techniques, with particular focus on preparing new EMS trainees for the verbal abuse and potential physical assault(s) they may experience in the field. More experienced training staff should seek to emphasize a zero-tolerance culture for WPV amongst their trainees and this culture should be practiced from agency leadership down to frontline staff.

Proposed operational changes, such as ambulance redesigns and duress alerts should involve stakeholder involvement from frontline staff to better understand potential downstream effects of staff safety. Finally, mental health and wellbeing resources should be widely available to staff for the various job-related stressors they experience and not solely limited to violent patient encounters.

LIMITATIONS

Although our large multistate ambulance agency is diverse and encompasses both rural and urban settings, our findings are isolated to one single EMS agency in the Midwest and may not be representative of other agencies. We recognize our findings may be influenced by self-selection bias among our cohort. Our purposive sampling strategy was intentionally directed at participants who had previous experiences with WPV, because of this our results may not fully represent the attitudes and/or perceptions of WPV among the EMS community as a whole, however, efforts were made to capture perspectives among diverse groups. Only 34 EMS clinicians indicated interest in study participation, approximately 8% of staff, although after exclusion of supervisors and operational leadership, this number encompasses a higher percentage of the intended study population. Despite our purposive sampling strategy, there were challenges with ensuring adequate representation across levels of licensure. Our study sample included 21 paramedics but only 1 emergency medical technician (EMT). With EMTs comprising one-third of our agency's workforce, it is unclear why we were not able to recruit more EMT participants. As such, the results of this study are likely more reflective of a paramedic's experience of WPV rather than equally that of paramedics and EMTs.

CONCLUSIONS

Emergency Medical Services personnel are commonly traumatized by violence in their work and non-physical violence is underappreciated. Despite its impact on staff and subsequent patient interactions, most participants reported plans to remain within EMS. Multi-faceted system-focused efforts are needed to shift toward and support a zero-tolerance culture for WPV.

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Table 1: Demographics of study participants (N= 22)

	N (%)
Certification level	
Paramedic	21 (95.5%)
EMT	1 (4.55)
Primary shift worked	
Day	13 (59.1%)
Swing (1000-2200)	2 (9.1%)
Night	5 (22.7%)
Multiple shifts	2 (9.1%)
Gender	
Female	11 (50.0%)
Male	11 (50.0%)
Race	
Asian	3 (13.6%)
Black or African American	3 (13.6%)
White	16 (72.7%)
Ethnicity	
Hispanic or Latino	2 (9.1%)
Not Hispanic or Latino	19 (86.4%)
Unanswered	1 (4.5%)
Average Annual 9-1-1 Run Volume†	
2,400 runs	1 (4.5%)
3,500 runs	1 (4.5%)
6,300 runs	1 (4.5%)
20,500 runs	3 (13.6%)
22,000 runs	16 (72.7%)
Average Annual IFT Run Volume†	
450 runs	3 (13.6%)
1,300-1,500 runs	16 (72.7%)
2,000 runs	1 (4.5%)
3,400-3,500 runs	2 (9.1%)
Years working at Agency	
<1 year	3 (13.6%)
1-4 years	4 (18.2%)
4-8 years	8 (36.4%)
>8 years	7 (31.8%)
Years working in EMS Overall	
<1 year	1 (4.5%)
1-4 years	2 (9.1%)
4-8 years	1 (4.5)
>8 years	18 (81.8%)
Verbal Abuse (threatening tone of voice, abusive language, racial harassment, gender harassment, sexual harassment, or threats of violence) experienced in prior 6 months	
Yes	20 (90.9%)
Physical Assault (assault with weapons, assault with bodily fluids, punching, biting, scratching, or sexual assault) experienced in prior 6 months	
Yes	7 (31.8%)

Table 1 footnotes: *†Average annual 9-1-1 and interfacility transport (IFT) run volume at participants' agency sites. EMS = Emergency Medical Services.*

Table 2: Summary of themes and categories with participant quotes

Description	Examples of what we heard
Theme: Personal Impact	
Comments related to how WPV has impacted participants on a personal level	"There's just a distrust because– you think things will be okay, and it catches you off guard. And some of my experiences have been in situations where it definitely was not expected." (P6) "For me, it's the sexual assaults. You don't expect that. And when it happens – sorry, it's a little bit hard to talk about – but you feel helpless and uncertain because it's such a personal violation. And you try to rationalize it, saying that the patient is just drunk, that they don't know what they're doing, but it stays with you for a very, very long time." (P2)
Concerns over personal safety, feeling vulnerable, heightened situational awareness	"I approach my scenes much differently. I trust nobody. I give everybody the benefit of the doubt, but I usually keep my distance." (P5) "I would say the [thing] that really changed that affects me in and outside of work is the hypervigilance. I will look at a situation and start immediately thinking of exits and if – what could go worse at all times. And it's not always necessarily I think it's going to be the worst. It's just my brain automatically prepares a solution for if it does." (P6)
Experiences of discrimination or harassment related to personal characteristics / social identities	"It is degrading. Well, even beyond that is if they said you can't do your job and stuff like that, that's one thing. But the degrading stuff they say about women I wouldn't want said about any of my family members, much less my co-workers." (P10) "When I first started here, I had just gotten off [field training] and we got called for a [patient with back pain]. And when we started transporting, I was adjusting the seatbelt over him. I think I was helping him get a sweatshirt off. And as I… pulled on it, and I asked him to pull his arm out, his hand brushed up against the front of my chest. And he said, 'Oh, I'm sorry. I wasn't meaning to like touch you.' And my reactionary response was, 'That's okay. Just try not – it's not a big deal.' And I didn't think he was trying to grab me. And he thought it would be funny – he said, 'Oh, that's okay,' and reached up like he was going to grope me. And I like immediately drew back, and he was like, 'I'm just joking. I'm just joking,' which just – I was like I didn't know what to do. I was like, 'uh, no.'" (P17)
Theme: Impact on Patient Interactions	
Comments on how the participant has changed the way they treat patients. Includes ways their personal experiences with WPV have impacted how they respond on scene (e.g. heightened situational awareness)	"Patients are always lying down when I take care of them because I've had my chest grabbed because our medication cabinet is right where the head of the cot comes up, and it puts your chest literally right in the patient's face. And with a drunk male, I've been touched several times because of that." (P2) "I am more prone on making sure I identify, 'did someone give Narcan to this patient,' so I can be prepared for when they do that rapid wake-up. I try to prepare myself for the potential that there was a combination of drugs because people react differently. So, I am more prone to using restraints and chemical sedation quicker in calls than I may have been previously." (P7) "For me, I mean I like to think I have relatively thick skin. So, when [patients] start getting verbally violent with me, I don't take it personally. But more so, it just impacts me in the sense that they're not letting me help them. Whether they recognize they need

	help or not, it's kind of really limiting my abilities in what I can do to kind of help minify the situation and, ultimately, give them a better outcome." (P3)
Theme: Career Longevity/Sustainability	
Comments on how the participant feels about their job, Job satisfaction	"But I do consider my mental health and my physical safety, and it does give me pause sometimes when I think about my career and how long I'm going to stay in EMS just because it is taxing to be berated on a regular basis. I don't think people intend to do much harm, but it does have a long-term impact on the way that I view EMS, in general." (P14) "I don't really have plans to give up this job. I mean I love this career. Workplace violence – we get into the unknown, chaotic situations. People are unpredictable. We're going to have combative and verbally abusive patients, at the very least, at times, on our job. But yeah, I don't have any plans to leave." (P21)
Comments describing the compounding effects of the job; Job burnout	"That's one of the reasons that I did leave. I was passionate about what I was doing, but it got to the point where I just didn't feel safe. And mentally, I was not in a good place, finding myself becoming angry, almost wanting to return violence with violence… is when I knew I had to leave. And so, I. took an eight-year hiatus, and I'm happy to be back. I'm in a better place." (P5) "There's been a couple of instances in my career where, yeah, where it's like, maybe I should just find something different to do, that it's not worth it [and] wanting to leave." (P8) "When you've had a rough day, I feel like that burns me out. I feel like energetically exhausted. I think that sometimes the patients are extremely draining to me. But then the next day starts, and it starts all over, and it's fine." (P11)
Concerns raised about professional liability in the event a patient gets injured in self-defense or they need to flee the scene	"But there are times when, if you don't want my help and you're trying to hurt me, how far can I go to protect myself? I mean I don't think any of us want to purposely injure a patient. But if it's between me going home and them being injured, I'll take that chance every day with my supervisors because I'm going home at the end of the day. That's my goal. I have a wife. I have kids. And honestly, it's more important for me to be there than to be at this job…" (P1) "Historically, we've always been told, "If you don't feel safe, leave." But it's not always that simple or black and white. Had I just exited the ambulance when the patient initially started to become aggressive and he – because we were on the side of an active roadway and by a bridge over the interstate – got hit by a car or jumped or something like that, I think that I would be held to some sort of litigation. So, I think that's always in the back of our mind too." (P18)
Theme: Relationship between EMS Culture and WPV	
"it's part of the job." -- comments where participants say WPV is expected or something they tolerate as part of the profession	"I feel like we're kind of used to it, which isn't funny, but it just comes with the job, I think." (P11) "We often get patients who are… not happy to see us, and they will verbally let us know that they're unhappy, whether it's just through yelling, screaming, hollering, threatening... so I think that aspect of it, the verbal aspect, probably happens fairly regularly." (P1)

Mentions of conditions or factors that serve as underlying influences believed to have contributed to the violent incident	"I've been doing this a long time, so I've [dealt with] people who are either intoxicated or under the influence of drugs or even just with a brain injury of some sort where they just aren't completely alert, they do get verbally aggressive. I've also had multiple sexual harassment from patients – people that are drunk. I've had one elderly patient who was verbally and physically aggressive with me; he grabbed my crotch. And, yeah, I think women encounter it a lot more than men do. And the culture kind of just says, 'Well, it's okay. They weren't alert and oriented, so they don't really know what's going on, so it's not really assault.'" (P2) "One of my most recent cases of violence was about a month ago now… and it was a patient who had been under the influence of some unknown substance. He wouldn't say what it was. And he was very anxious but calm, and then it flipped like a light switch. He just went berserk, and he tried throwing off all his restraints, and I didn't know if he just wanted to get out of the ambulance…" (P3)
Examples of shifts in societal norms/behavior (eg. increased anger, political divides)	"I've been in public safety since 2011, so I've seen the change. And I don't – I don't know if it's the public against public safety; I'm not sure. I just think, as a whole, this nation and the world, we're just more, I don't know, angry, agitated people, and I really think that it's because more and more people are suffering, and they're not getting the help that they need, but it puts us at a very vulnerable position." (P16)
Theme: Future WPV Prevention and Mitigation	
Comments related to how WPV could be avoided or prevented in the first place. Includes training, commonly used tactics, policies and procedures; implementation of ballistic vests within the agency; environmental factors; supportive systems	Public education... I don't know if it needs to be a commercial that's run or an ad or something like that that makes it very clear that assaulting health care workers is not acceptable." (P20) "Just having somebody who's not a part of that higher leadership that has mental health training that can talk you through things or talk through calls with you or say, 'It's not your fault that somebody got aggressive with you or thought it would be okay to jokingly sexually assault you,' or something like that and just have that sort of mental health encouragement." (P17)

Table 2 footnotes: *WPV = workplace violence.*