Ambulance officers: the impact of exposure to occupational violence on mental and physical health

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Abstract
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Keywords
impact, exposure, violence, mental, health, officers, ambulance, occupational, physical

Disciplines
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The authors conclude that greater attention needs to be given to the prevention of mental health consequences from occupational violence among ambulance officers, in addition to those directed at minimising physical injuries.

KEYWORDS
- AMBULANCE OFFICERS
- MENTAL HEALTH
- OCCUPATIONAL VIOLENCE
- PREVENTIVE MEASURES
- RISK FACTORS
Introduction

Occupational violence is a health and safety issue that is receiving growing attention across the industrialised world. Research studies have repeatedly concluded that the probability of exposure varies between occupational groups because the risk factors vary.1 The authors of the present article conducted a major study into the violence experienced by health workers that included: an analysis of international data and research literature; the publication of a series of working papers; and an extensive empirical study involving face-to-face interviews with 400 health workers, including 40 operational ambulance officers. It was found, among other things, that there were significant differences in risk between the various health occupational groups. The general findings of the whole study were published as a special issue of this journal.2

This article sets out to highlight in greater depth and detail the risks of violence to operational ambulance officers and to identify the consequences on their physical and mental wellbeing.

Patterns of occupational violence in the health sector

It is generally agreed that occupational violence encompasses a wide range of behaviours, including physical assaults (varying from spitting to homicide) and psychological conduct (such as bullying and harassment).3 With regard to health workers, occupational violence has been defined at the international level as:

"...incidents where staff are abused, threatened or assaulted in circumstances related to their work, including commuting to or from work, involving an explicit or implicit challenge to their safety, wellbeing or health."4

In conducting and reporting on the findings of the author(s) study, this definition has been adopted. So has a widely accepted typology of occupational violence which divides this phenomenon into three broad categories: external, client-initiated, and internal.5 The first category involves violence that is perpetrated by people from outside an organisation, such as armed robberies and hold-ups. The second category involves violence that is inflicted by customers or clients (in the health sector, this is most typically assaults on staff by patients), while the third involves violence which occurs between workers in an organisation.

Methodology in brief

The Australian public health department employed approximately 2,640 ambulance officers when this study was conducted. A total of 40 interviews were held with operational ambulance officers, which represents approximately 1 in 66 sample. (An operational ambulance officer is one who has face-to-face contact with patients, that is, they are not predominantly office-based.) Half of the ambulance officers worked in rural areas and half in urban. Both quantitative and qualitative data were acquired to enhance our understanding and to identify the contexts where the different forms of violence were more likely to occur. A standardised, semi-structured, interview-based questionnaire that required both quantitative and qualitative responses was devised. This questionnaire was anonymous and formatted in such a way that the data could be compared against other occupations.

All interviews were conducted by the same researcher and no individually identifiable data were retained. Face-to-face interviewing was preferred in order to ensure good response rates and to gain comprehensive contextual data. For example, many people may not divulge personal information via a mailed questionnaire, and probing on sensitive issues is far more difficult via the anonymous telephone. All interviews were one-on-one, with the exception of three dual-person interviews conducted with ambulance officers (because they worked in teams and stopping work for an interview required both officers to be absent from their tasks).

The quantitative data

The scientific research literature and the present study indicated that patterns of occupational violence varied across health occupations because risk factors differ. In total, 77.5% (n = 31) of the 40 interviewed ambulance officers reported that they had experienced 83 separate violent incidents in the previous 12-month period. The rural ambulance officers reported that they had been involved in more violent incidents (n = 48) than had their metropolitan counterparts (n = 35).6 Based on these reported events, on average, each ambulance officer can expect to experience 2.1 violent incidents per year. Nevertheless, this was a small sample of 40 ambulance officers out of an estimated 2,640 across the state (approximately a 1 in 66 sample), and any extrapolations should be made with caution. The 40 operational ambulance officers cited no physical injuries as a result of these violent incidents, although one reported a stress-related illness. The breakdown by type of violence and perpetrator is shown in Table 1. Many incidents involved abuse, threats and assaults (as such, line totals in Table 1 exceed 100%).

The data in Table 1 are collated from specific incidents described by the 40 interviewees. In addition, a number of interviewees described repeated incidents during their interviews (which are not represented in Table 1), for example:

"Alcohol-induced outside hotels. You get a fair amount of abuse from public and/or family members. You get called to someone assaulted or injured; typically 95% at night and can be any day. Typically male but females do it as well, between 20 to 40 age group. We'll call for police to be on scene. Our job finishes after first aid or hospital transport. Personally happens once every three weeks. Depends on what level you call abuse. If someone tells me to go and get fucked, or to piss off, I'd call that abuse. If someone tells me to go and get fucked, or to piss off, I'd call that abuse. Which happens every three weeks or more often." (Interviewee 392)*

This quotation indicates that, for operational ambulance officers, verbal abuse is almost a "normal" part of their job. However, this abuse may not have a significant immediate impact on those accustomed to it, as the following quotation demonstrates:

"You get told where to go all the time. We just laugh at it. If you didn't laugh at it, you'd end up getting depressed. Happens about once a fortnight, 20 times a year." (198)

The Violent incidents occurred in a wide range of community locations, in ambulance vehicles, as well as occasionally in emergency departments when patients were being transferred. The working conditions for operational ambulance officers in metropolitan and rural areas are different — as are their experiences of occupational violence. For example, in rural areas: ambulance officers may be familiar with the perpetrators of violence and/or their families; stations are likely to have a few rostered (or even off-duty) staff members; there may be expanded community expectations of ambulance officer roles; and it may be more difficult to "escape" work roles, particularly in more remote areas. In terms of exposure to occupational violence, the major differences between responses from officers working in metropolitan and non-metropolitan areas were that the rural officers experienced more violence, were more frequently at remote locations where there was limited back-up, and had to negotiate situations involving Indigenous Australians more often. The following violent situations were reported:

"Verbal abuse from patient, bystanders, relatives. Male and female of varying ages. At house, pub, street, wherever. Common denominator is alcohol or drugs. Yes, report. Consequences — who knows what the follow-up is — verbal abuse is never followed up we put up with it. Happens Violence is a daily occurrence. When I was at [named remote outback town], really dangerous. Since I've been here [named small rural town] for 12 months, only a couple of incidents." (299)

* Each interviewee was provided with an additional identifying number (but no name) in the qualitative data records.
Impact of occupational violence on ambulance officers

<table>
<thead>
<tr>
<th>TABLE 1</th>
<th>Type and number of violent incidents experienced by 40 operational ambulance officers, by perpetrator category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perpetrator category</td>
<td>Verbal abuse</td>
</tr>
<tr>
<td>Clients</td>
<td>29</td>
</tr>
<tr>
<td>Relatives, visitors and bystanders</td>
<td>20</td>
</tr>
<tr>
<td>Other stuff</td>
<td>4</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
</tr>
<tr>
<td>Total incidents</td>
<td>54</td>
</tr>
</tbody>
</table>

"In ambulance. Got out to assess patient on [named metropolitan beach suburb]; 3 am. Male patient, 25ish, told us where to go. Called us names. So we jumped back in ambulance and he started kicking the ambulance. We left. We went back to find him a few hours later and he was in a police cell." (198)

Sexual harassment

While the majority of interviewed ambulance officers were male, there were a number of female officers. In this study, sexual harassment was not specifically investigated. Nevertheless, sexual harassment from clients was occasionally cited during interviews, for example:

"Old fellow likes to maill your leg a bit; grope. Daytime. I sit up the front [of ambulance] and don't sit with him. He does it to other officers ... one fellow keeps calling back ambulance till he gets female officers and he'll grope them." (99)

Bullying

Bullying from colleagues was less commonly reported by the interviewed ambulance officers. However, the impact on the recipients was significant, as the following quotation demonstrates:

"Male, about 40-45, during the day. Happened about four times in last 12 months. Usually on a day with lots of people around but at a moment when they are all busy — a selected period when no one would notice. He typically acts in capacity of a supervisor and passing on an order, and he shouts and rails and swears unnecessarily. My name gets sufficed and his doesn't. I'm on the cusp of writing my resignation." (398)

The worst violence I ever experienced in the job was a physical and sexual assault from another ambulance officer which required me to take time off work. The ambulance officer had a history prior to joining the service. Consequences — after 18 months, he was sacked." (391)

The above direct quotations indicate that occupational violence in the form of bullying does occur, perpetrated by one operational ambulance officer towards another or others. As has been identified elsewhere (and is discussed further below), the consequences of this form of occupational violence can be severe.6

The perpetrators of violence: risk factors

The international research literature consistently shows a link between intoxication and violence, with young males affected by drugs or alcohol being high-risk perpetrators. For example, Hornel has conducted a series of studies on the relationship between alcohol and violent offending around Gold Coast nightclubs and elsewhere.7

The operational ambulance officers reported a comparatively high level of exposure to violence. The data indicated that high-risk people and situations were concentrated in particular places, such as outside pubs or in houses during domestic violence altercations. For example:

"Christmas Day at 8.30 am. At a hotel, an intoxicated male was throwing heavy chairs at me and verbally threatening. He has been charged ... arrested/police custody ... Drunk male; 20-year-old on the street about 12 at night. He chased me around the ambulance trying to bash me. He was arrested." (195)

"An elderly gentleman we took to hospital who was intoxicated. We asked the sister if she wanted us to stay and keep an eye on patient and she said no. Then the next morning, we heard 10 minutes after we left he went 'troppo' in accident and emergency and smashed a lot of gear and wrecked a defibrillating machine." (291)

"Perpetrators usually male aged 16 through to 40; usually on the street outside nightclubs in early hours of morning from 11 pm to 3 am." (400)

Gender of perpetrators

The gender profile of the perpetrators of aggression in each of the 83 violent incidents was ascertained wherever possible. In 54.2% of incidents (n = 45), the perpetrators were male; in 18.1% of incidents (n = 15), they were female; in 7.2% of incidents (n = 6), both males and females were involved; and in 20.5% of incidents (n = 17), the gender was not stated. That is, quantitative data indicated that males were the perpetrators of the majority of the violent incidents reported by the interviewed operational ambulance officers. Qualitative data provided a similar picture:

"Generally, more men are the assault offenders. Women are more verbally abusive and tend to yell and scream." (194)

Alcohol and illicit substance intoxication

The qualitative data revealed that ambulance officers believed that alcohol and illicit substances were frequently associated with violence:

"Yes, physical threat and abuse from patients to staff. See about once a week, for example, every four days and can be anywhere and any time. Multi faceted — can be the smackie on the street who is whacked out of his brain, to the neurosurgeon whose son has collapsed in their mansion from a drug overdose" (196); "... drunk 15 to 25-year-old males" (198); "Yes, male and female between 20 to 35; usually alcohol affected. Without the alcohol, they are okay" (298); and "Some days/some times of days, for example, Friday and Saturday nights, anywhere where alcohol is served: pubs, parties and Aboriginal missions." (398)

"Alcohol is the biggest problem, and drugs are now starting to show up in the township. There is a lack of employment in the area and young people don't want to get off their bum and work. There's too much money available to them. Over the last two years, there's been an increase in alcohol-related abuse on ambulance officers and hospital staff, mostly young people and mostly verbal." (291)

Age of perpetrators

Frequently, the comment was made that younger people were more often the perpetrators of overt violence, for example: "Older are less violent" (96); "It's that young age group with alcohol" (300); and "Usually don't have problems with elderly or those with actual medical problems." (393) However, dementia among older clients may be a risk factor for violence: "... elderly demented patient bit a female ambulance officer." (97) In the authors' major study on violence in the health care industry, hate pulling, slapping and even punching were cited, primarily by nurse interviewees.

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Geographical locations

There is also evidence from outside the health care sector that violence in the general community is not homogenously distributed. For example, during the 12-month period of January to December 2006, the incidence of apprehended and prosecuted assault offenders in the community was significantly higher in rural and remote areas of New South Wales (such as the local government areas of Bourke, Walgett, Cooamamble, Moree Plains and Bogan, where assault rates per 100,000 population were the highest). The data provided by ambulance officers are consistent with these findings and with those published in the international research literature.

For example:

"... far western ... town ... Molotov cocktail thrown at ambulance by a youth; early am whilst proceeding to another casualty case. Group of youths on side of road, male and female ... Verbal abuse from patient, bystanders, relatives. Male and female of varying ages. At house, pub, street, wherever. Common denominator is alcohol or drugs ... When I was at ... named remote outback town], really dangerous. Since I've been here [named small rural town] for 12 months, only a couple of incidents." (299)

"30 km from here is an Aboriginal mission/reserve. Ninety per cent of the time we go out there, it's because of a violent case. Go out weekly. We get fringe abuse each time but the troublemaker. Police are out there as much as we are. The scariest thing is I go out to this place alone and not knowing what I'll find." (398)

"The risks are increased for ambulance officers in isolated areas or for those who are assisting the injured/ill in buildings or rooms where egress is difficult, for example:"

"Afternoon on a weekday. A male who was the alcoholic son of the patient told me that if I didn't fix his father, he was going to stab both myself and my partner to death. We couldn't get out of the house, and we were trapped on the fourth floor treating the father in the back room. We barricaded ourselves in the bedroom. Our communication systems didn't work. Police subdued the perpetrator and he was left at the house and his father went to hospital ... We are put in situations we shouldn't be in." (196)

"Patient's friend had locked the front door [security screen] on fourth floor flat. Ambulance officers unable to get out. Patient's house had syringes and needles on scene. Both patients had needle tracks up their arms and the job called out to was a hoax. Patient's friend then picked up multiple knives, including a large boucher's knife." (96)

Domestic violence incidents

The interviewed ambulance officers reported quite frequent involvement with violent family disputes to which they were requested to attend in order to provide assistance to an injured party. Often this attendance preceded any notification of a violent incident to the police:

"Get a few domestics and get abused. Usually it's the men telling us to 'get out; leave me alone; it's none of your business'. Usually in their homes; majority in afternoon/evening. Maybe 12 in last year. We request police attendance." (194)

"We work in a totally unique scenario. If I'm in a violent situation involving a critically injured patient working with junior officers, I've got multiple jobs to do. A man that has just stabbed his wife may call 000 and state that his wife has fallen over with a minor injury. He doesn't want police and we walk in." (196)

"Typical scenario, for example, go to domestic and they'll turn on you. Mostly male who has assaulted his wife. Happens about once a month." (295)

Strained economic circumstances

Many ambulance officers asserted that strained economic circumstances were associated with increased aggression:

"More in lower socioeconomic areas and areas where there is high use of drugs and alcohol, that is, dance parties and parties in general" (93); "Yes, lower socioeconomic who don't have any respect for anybody or anything. Males have greater proportions, but still some females" (392); "Yes, Aboriginals are more violent because of the socioeconomic status they are in, lifestyle, and alcohol and drug abuse" (299); "More common at night. One particular house in [named rural town]. We might go there several times a week — alcohol and drug-related" (291); "Yes, housing commission area with low socioeconomic people" (295); and "More common in certain areas of town than others, for example, lower socioeconomic areas." (400)

Mental health and "dual diagnosis" clients

Mental health clients were sometimes cited as perpetrators — commonly when those with a recognised mental health illness had also taken illicit substances or were "dual diagnosis" clients. Typical comments were:

"Definitely; people with violent histories, and psychiatric histories" (292); "... people with psychiatric-type problems ... drug and alcohol problems ..." (97); and "... verbal abuse, threats and assaults from our patients and the public. Typical perpetrator is intoxicated, domestic violence situation, or mental health patients. See three times a week; more frequently in evenings." (391)

Recipient characteristics

The gender profile of the recipient of each of the 83 violent incidents was ascertained. Of the population interviewed, 72.5% were male ambulance officers and they experienced 67.5% of the violent incidents; 27.5% were female ambulance officers and they experienced 32.5% of the incidents. While the data gathered during this research project identified that urban female ambulance officers were
disproportionately victimised, the numbers are too low for definitive interpretations. Another large study that is specifically focused on the occupational violence risk for operational ambulance officers could more definitively compare the incidence and severity between rural and metropolitan staff. None of the 40 operational ambulance officers required time off work following the violent incidents.

The age profile of the recipient of each of the 83 violent incidents was ascertained. However, the data indicated that there was no clear indication that the age of an ambulance officer was a significant factor associated with the violence.

Reporting of violent incidents

The 40 operational ambulance officers were asked whether the violent incidents had been reported to anyone. Overall, 38 of the 83 incidents (45.78%) had been reported to one person or another (14 were reported by metropolitan ambulance officers and 24 by rural ambulance officers). The reporting of verbal abuse was unusual. The people informed about these incidents included supervisors (n = 17); police (n = 8); hospitals/services (n = 6); OHS coordinators (n = 2); and “another person” (n = 5). In addition, in a further 18 cases, police were already at the scene or had already been called. There was an increased propensity to report violent incidents in rural areas compared with metropolitan areas. Reported incidents also appeared to be those that might have long-term consequences or were potentially life-threatening, as the following direct quotation indicates:

“It was late afternoon. A female patient who was intoxicated and drug affected. She struck me in the head and my partner took control of the situation. He held her down till we got the police on the scene. I asked her to stop and she got scratched in the face.” (293)

A number of interviewees stated that they used an internal system for “flagging” high-risk premises to pre-warn other ambulance officers who might be called on in the future:

“Bloke about 25, early am at a party and had a tumble. Requested via 000 and his friends. History of violence from the address. Police told. Knocked on door of house, went in, and they asked us to look at bloke who had fallen on his arm. Approached him slowly as had a gut feeling and put equipment down and asked him if he minded if I looked at his arm. He said ‘if you fucking touch this arm I’ll fucking break this bottle over your head’. So we egressed slowly backwards out the door and didn’t persist. Got the coordinating centre to mark the address as violent; flagged for any further ambulance calls.” (292)

Because police officers were also often called to the same emergency situations as operational ambulance officers (for example, following motor vehicle accidents, and at domestic disturbances and street brawls), there appeared to be something of a symbiotic relationship between these groups of workers. In addition, ambulance officers were sometimes called to police stations if offenders required first aid and, on occasion, both police and ambulance officers attended the same patients at emergency departments in hospitals:

“Another frequent call for us is to the police station to treat patients in custody. Often the patient is too violent for us to treat. The police must be restrained for us to treat. I have been verbally abused, spat at, and had to struggle with patients to treat their injuries.” (94)

“Plenty of threats from the crimes up the police station when they have the capsicum spray in their eyes. About once a fortnight. Usually male, 18, up to anything.” (293)

“Female at police station who was sprayed with capsicum spray. Aged 17; just a little girl. She accused me of laughing at her. I’d been talking to the police and smiling at something. She was going to get me and wipe that smile off my face etc. Something that happens usually when there is alcohol involved; get abused. Can be the pub or street or house or anywhere. Usually the females target anyone with a uniform; the young ones. Happens a lot; about once every couple of months. Usually involves a fight and we get called by the police to treat injuries.” (300)

As the above direct quotations indicate, perpetrators of occupational violence against operational ambulance officers can be male or female, young or old. The risks range across the spectrum, and include verbal abuse, threats to individual officers or his/her family, blood or saliva-borne disease transmission from spitting or biting, physical injuries and, potentially, homicide. There are a range of sites where occupational violence occurs, including domestic premises, pubs, roadsides and police stations. There can also be significant emotional consequences for the recipients, as is described in the section below.

Emotional or mental health consequences for operational ambulance officers

It was hypothesised that there were likely to be some emotional stress repercussions following violent events, in addition to any physical injuries. An objective and simple instrument to measure these stress outcomes was required. The General Health Questionnaire (GHQ) is an instrument that has been repeatedly used and validated across a range of Australian and international studies to measure levels of stress. The GHQ has pre-set questions with numerical scores allocated for each response; these are then totalled to give an overall score. The abbreviated GHQ-12 was selected and attached to the semi-structured questionnaire used during interviews to gather data. Past studies have indicated that, using the Likert scaling method, a GHQ-12 score of between eight and 10 is relatively normal, with a threshold of about 11 or 12; a person with a score greater than 14 probably requires urgent assistance. The threshold score has been defined as: “… the number of symptoms at which the probability that an individual will be thought to be a case exceeds 0.5.” Nevertheless, there are questions about the ability of the GHQ to detect long-latency conditions, for example, post-traumatic stress disorder may remain undisclosed in the short-term. All 400 interviewees were requested to complete the GHQ-12; the scores were collated using the Likert method, and then those interviewees who had experienced verbal abuse, threats, assaults or bullying over the past 12-month period were separated out for analysis. (Only one interviewee was unable to complete the form; he was an ancillary worker of non-English-speaking background and declined re-scheduling with an interpreter.) Interviewee GHQ-12 responses were totalled to give: (1) an individual score; (2) an occupational group score; and (3) an overall score. A breakdown of GHQ-12 scores by number of violent incidents experienced over the previous 12-month period is provided in Table 2. Because the numbers are quite low in some cells at this level of analysis, the findings may be less reliable than for the overall scores.

The data in Table 2 show a clear rise in GHQ-12 score that was correlated with increasing exposure to occupational violence over the previous 12-month period. The overall GHQ mean score for all interviewees in all health occupational groups was: no incidents — GHQ mean score of 9.98 (Std 4.18); one incident — 10.99 (Std 5.08); two incidents — 12.45 (Std 5.54); and three or more incidents — 12.65 (Std 4.91). When recipients of bullying were separated out, their GHQ-12 scores were found to be the highest of any sub-group, with nearly all above the clinically significant level of 14. The 40 interviewee ambulance officers had an average score of 10.75, which is about the baseline expected for the population as a whole. There was a marked difference between scores from the 20 interviewees from metropolitan area health services (8.5) and the 20 from rural area (13.0). The average score of ambulance officers experiencing no violent incidents over the previous 12-month period was 8.78, for one incident it was 10.75, for two incidents it was 8.75, and for those who experienced three or more incidents it was 12.98 (one of whom was also bullied). Operational ambulance officers in
TABLE 2

Ambulance officer stress levels using GHQ-12 scores, by number of violent incidents in previous 12-month period

<table>
<thead>
<tr>
<th>No. of incidents</th>
<th>0 incidents</th>
<th>1 incident</th>
<th>Two incidents</th>
<th>Three or more incidents</th>
<th>Bullied separated out</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>GHQ score</td>
<td>8.78</td>
<td>10.7</td>
<td>8.75</td>
<td>12.96</td>
<td>29</td>
<td>10.75</td>
</tr>
</tbody>
</table>

The regression analysis indicated that the stress impact of occupational violence on health care staff was not necessarily related to the physical severity of the incidents:
- a rise in the number of violent incidents experienced was correlated with a rise in GHQ score;
- assaults were not directly correlated with an increased GHQ score, and
- bullying incidents (which had the least severe physical injury) had, overall, the highest level of emotional stress impact.

There are three possible explanations for the non-significant relationship between assaults and GHQ scores, any of which may apply:
1. It has been reported in the scientific literature that the GHQ has a limited ability to detect long-latency conditions such as post-traumatic stress disorder. Thus, because the GHQ-12 assessed only emotional stress impact from violence at work. The hospital is a controlled environment where there is an identified risk of violence with police. Ambulance officers to carry capsicum spray: Violence towards ambulance officers is widespread and appears an insurmountable problem. Security guards have been placed in hospitals but we have no support in the areas we work. The hospital is a controlled environment and support is available whereas we go down alleyways in [named suburb with reputation for high drug use] with no support.
2. The inadequacy of current intervention in emergency alarms was highlighted:

"We need a duress alarm on our person. At the present time, once we are away from our ambulance, we have no way of getting help. They say we carry portable radios to call for help but they don't work 50% of the time. Plus, if you are trying to protect yourself, it's pretty hard to get your message across." (94)

"Minimum two-man crewing to deal with violence associated with the use of alcohol and drugs and unemployment.
Prevention strategies could initially focus on reducing the risks in the "hot spots" reported by the interviewees. For example, portable duress alarms could be carried on the person and be appropriately linked through global positioning system technologies to response systems (where these exist). Similarly, a continuation of the practice of "flagging" high-risk domestic premises may reduce the risks. The two primary approaches recommended by the ambulance officers were: (1) increasing police presence at incidents to better "control" violence, and (2) enhancing the knowledge of officers in violence mitigation strategies. For example:

"Response times to receiving police back-up when ambulance officers call for urgent help." (95)