Violence towards doctors: prevalence and effects

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Violence against doctors has already been identified as a matter of particular concern. Both the severity and the psychological sequelae of violence are difficult to quantify. This study was aimed at measuring the rates and severity, and determining the effects, of violence in doctors working in a general hospital.

The increasing number of physical and verbal assaults on staff who deal with the public is causing alarm to many employers (Income Data Services Study, 1990). Professional groups such as teachers, doctors and other health-service workers are becoming increasingly fearful of assaults at work. It has also been stated that, of all the work settings, medical sites carry the greatest risk, with 73% of the staff suffering abuse and threats, compared to 65% on recreational premises and 63% for transport and public administration (Health Services Advisory Committee, 1987). The risk of violence directed at health-care professionals in their working environment has aroused widespread concern in recent years (Health Services Advisory Committee, 1987; Harrington, 1990; Hobbs, 1996). In the UK the clinical areas most associated with violence are accident and emergency departments, community settings and psychiatry (Health Services Advisory Committee, 1987).

The true incidence of aggression against doctors is difficult to determine from the literature. Available evidence suggests widespread variation in rates between doctors working in different areas and among different groups of patients. The reported incidence of violence in general hospitals varies from 54% to 79% (Schnieden, 1993a; Hobbs, 1996). Severity of incidents recorded varies in different studies, as does the definition of what constitutes violence. The Health and Safety Executive (1986) defined violence as:

> **'Any incident in which an employee is threatened or assaulted by a member of the public in circumstances arising out of the course of his or her employment'.**

The Health and Safety Executive identified verbal abuse and threats as the commonest types of incidents. However, many such incidents are not reported and staff may even expect to encounter them as part of their normal work (Cembrowicz and Shepherd, 1992).

EFFECTS OF VIOLENCE

The possible effects of aggression on an individual are varied and are likely to depend on the severity and frequency of episodes and the perceived vulnerability to further episodes. Numerous workers have pointed towards adverse psychological sequaelae in doctors exposed to violent incidents at work. These include post-traumatic stress disorder (Schnieden, 1993a), insomnia, agoraphobia, and depression (Income Data Services Study, 1990), and fearfulness (Hobbs, 1994). Moreover, experiencing aggression from patients can lead to changes in behaviour such as increased prescribing or referring patients to more secondary care. The perceived vulnerability to further violent episodes may lead doctors to seek long-term sick leave, and cause poor staff morale and higher than necessary staff turnover (Schnieden, 1993a).

We decided to determine the degree and effects of violence in a regional general hospital, one of the six general hospitals providing secondary health-care services in Kuwait. The hospital, staffed with about 135 doctors, has over 350 beds and serves a catchment area of about 350 000 (Vital and Health Statistics, 1994).

AIMS AND OBJECTIVES

The aims were to determine the incidence and severity of violence among all the doctors serving in the hospital and measure the effects of such violence.

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METHODOLOGY

Sampling

The sample consisted of all the doctors working in the hospital. The doctors working in accident and emergency were excluded as they were subjects of a similar study about violence in accident and emergency departments. All the doctors were delivered three questionnaires during March 1998 and these were collected in person during the following 4 weeks.

Instruments

A 12-item, frequency-weighted questionnaire was devised to measure rates, frequency and severity of violence. The items were arranged in the order of severity of acts of violence beginning with minor verbal insults to more serious acts like shooting with firearms (*Table 1*). Each question was weighted by the frequency of occurrence during the past year and the response format included six choices: once, twice, 3–5 times, 6–10 times, 11–19 times, 20 or more times. Reliability of the questionnaire was tested using Cronbach's alpha, which yielded reliability coefficients, based on 8-items of alpha = 0.6598 and standardized item alpha = 0.6861 (Norusis, 1990)*.

A 5-item, duration-weighted, questionnaire was devised to measure the effects of violence at work. The items were derived from the most commonly reported after-effects by the doctors subjected to violent incidents (Income Data Services Study, 1990). Five related items were selected: reliving experience, sleeplessness, depression, fearfulness and time taken off work. The response format consisted of five choices: up to 1 week, 1–2 weeks, 2–3 weeks, 3–4 weeks, and 4 weeks or more. The reliability of the questionnaire was tested by Cronbach's alpha, which yielded reliability coefficients of alpha = 0.7801 and standardized item alpha = 0.7786 (Norusis, 1990).

The prevailing practices and the views of doctors on violence were assessed through a 5-item questionnaire. The questions related to their concern about violence, any training that they might have received to deal with violent or potentially violent patients, any hospital policy regarding reporting of such incidents, and if the police had charged any offenders following aggressive incidents. Lastly, they were asked if they thought training to deal with potentially violent situations would be useful.

*One of the most commonly used reliability coefficients is Cronbach's Alpha. Alpha is based on the 'internal consistency' of a test. It is derived from the average correlation of items within a test, if the items are standardised to a standard deviation of 1; or on the average covariance among items on a scale, if the items are not standardised. Cronbach's alpha can be viewed as the correlation between this test or scale and all other possible identically-numbered scales measuring the same entity (Norusis, 1990).

Procedures

Categorization of violence: It is important to distinguish between various degrees of violence. Verbal insults or threats of violence carry little or no physical danger and hence draw little moral condemnation. However, physical acts of violence, whether single or multiple, have a greater likelihood of causing an injury, which may be serious or fatal at times, and hence are a matter of considerable concern both to the public and the medical profession. The 12-item questionnaire was, therefore, arbitrarily divided into three parts:

A. Responses to items 1–4, involving verbal insults or gestures implying imminent acts of violence, were regarded as mild
B. Items 5–8 involving a single act of physical violence unlikely to result in serious injury were considered to indicate violence of moderate severity
C. Items 9–12 entailed multiple acts of violence or the use of a knife or a gun likely to cause a serious or fatal injury, and were classified as severe in type.

Computation of violence indexes: The violence indexes can be expressed as either rates or scales. The rates are binary variables and the scales are continuous variables. The incidence rate has the advantage of unambiguous meaning and ease of understanding by the general public. In addition, since incidence rates are so frequently used in

TABLE 1.
Violent incidents reported by doctors

	Number of doctors reporting violence						
	1	2	3–5	6–10	11–19	20<	Total
1. Swore/insulted	20	24	14	5	–	3	66
2. Threatened to hit	13	6	1	–	1	–	21
3. Smashed/kicked something	7	2	–	–	–	–	9
4. Threw something at the doctor	4	1	1	–	–	–	6
5. Pushed or grabbed	5	2	–	–	–	–	7
6. Slapped	1	–	–	–	–	–	1
7. Kicked or bit	–	–	–	–	–	–	0
8. Hit with something	2	1	–	–	–	–	3
9. Beat the doctor up	–	–	–	–	–	–	0
10. Choked	1	–	–	–	–	–	1
11. Threatened with knife/gun	–	–	–	–	–	–	0
12. Used knife/gun	–	–	–	–	–	–	0
Total	53	36	16	5	1	3	

health statistics and epidemiology, expressing violence against doctors permits comparisons with other related phenomenon. The rates, however, do not reflect the degrees of severity.

For this reason frequency of violence in each of the three categories, mild, moderate, and severe, was also computed. The frequency designated by each response category, being a continuous variable, was computed by taking approximate midpoints from the choice-format: 3–5 = 4, 6–10 = 8, 11–19 = 15, 20 or more = 22.5. Both sets of data expressing rates as well as frequency are presented. The data were analysed on SPSS.

RESULTS

A total of 100 out of 135 doctors responded to the questionnaire (74%). Their ages ranged from 28–59 years with mean 41.86 (SD 6.70). The male:female ratio was 77:23.

Rates of violence

Out of 100 doctors, 68 reported having experienced violent incidents of one or another kind (*Table 1*).

From the 12 items used to measure violence the most commonly reported event was that they had been sworn at or insulted (*n*=66). The next most common were having been threatened to be hit (*n*=21), having smashed or kicked something (*n*=9), being pushed or grabbed (*n*=7), and having thrown something at the doctor (*n*=6). None of them reported having been kicked or bitten, beaten up, threatened with a knife or gun, and having a knife or gun used against them.

All doctors reporting violence experienced one or more of the incidents regarded as mild (items 1–4). In addition, 8 doctors also reported incidents regarded as moderate (items 5–8), and 1 doctor reported an incident classified as severe (items 9–12).

TABLE 2.
Frequency of violent incidents

Number of times (midpoint)	Frequency	Estimated number of incidents
1 (1)	53	53
2 (2)	36	72
3-5 (4)	16	64
6–10 (8)	5	40
11–19 (15)	1	15
20< (22.5)	3	67.5
Total	114	311.5

TABLE 3.
Effects of violence on doctors

Effects	Number of doctors (percentage)
None	9 (13.2%)
Depression	49 (72%)
Sleeplessness	36 (52.9%)
Reliving experience	33 (48.5%)
Fearfulness	25 (36.7%)
Time off	15 (22%)

Frequency of violent incidents

The estimated total number of incidents reported was 311 (mean = 3.11, SD = 15.46) (*Table 2*).

Of these 296 were regarded as mild, 14 moderate, and 1 severe in nature. Overall, 4.8% of the incidents involved physical attacks.

Relationship of violence to gender

There was no significant gender difference in terms of overall violent incidents reported ($P>0.5$). However, the mean number of incidents experienced by females:males were 0.73 (SD = 0.54):1.25 (SD = 1.23) respectively.

Effects of violence

Out of 68 doctors experiencing violent incidents at work, 59 (86.7%) reported having been affected by them. The effects reported, in order of frequency, were depression by 49, sleeplessness by 36, reliving experience by 33, fearfulness by 25, and 'time off' by 15 (*Table 3*).

All doctors were questioned about the duration of these complaints. Although the choice ranged from up to 1 week to more than 4 weeks, none of them reported the duration exceeding 1 week. A number of doctors developed more than one complaint following the violent incidents: 16 reported four out of the five effects, 10 reported three, 15 reported two, and 14 suffered from only one. Although more female than male doctors were affected by violence at work, the increase was not statistically significant ($P>0.1$).

Attitude of doctors towards violence

Of respondents, 70% reported that they were worried about violence at their workplace (*Table 4*), and 61% said they had been advised to report all incidents of violence. Only 5% reported having been trained to deal with violent incidents and on only 3 occasions was the offender charged by police. Eighty one per cent thought training to deal with violent patients would be useful.

DISCUSSION

Our findings suggest that more than two thirds of our sample of doctors experienced violent incidents at work. Moreover, among those exposed to

violence, a substantial number suffered from psychological ill-effects of one or another kind. Our sample did not include doctors working in the accident and emergency department, a site known to carry a high risk of violence. In fact the sample was a mixed one, consisting of doctors from all departments, including pathology and microbiology who have little or no direct contact with patients. This may explain why most of the violent incidents were limited to verbal insults or imminent physical assaults and only one in eleven doctors was actually physically attacked.

Similarly, the duration of the after-effects of violence in our sample did not exceed 1 week. Comparisons with previous studies are difficult because of widespread variation between criteria used to measure prevalence and quantify effects of violence against doctors working in different areas and among different groups of patients. During a seminar on violence held at BMA House in 1993, it was reported that verbal insults were experienced by 63.6%, physical violence by 41%, and physical injuries by 36.3% of the junior doctors, but these doctors worked in accident and emergency, psychiatry, and general practice, the areas associated with the highest incidence of violence (Schnieden, 1993b). Similarly, the 1995 BMA survey of 250 hospital doctors had found that 55% had been victims of, or threatened with violence at work (Coulson, 1995). The severity of violence, however, was not specified.

An interesting observation was the higher number of violent incidents reported by the male doctors. The increase in our study was significant at only 1% confidence level. The trend is consistent, although less marked, with an earlier study by Cembrowicz and Shepherd (1992) in which they found that male doctors were more likely (three times) to report violent incidents at work.

Health services in Kuwait are provided free of charge. The hospitals are often over crowded and this inevitably leads to lengthy waiting times. Violence may be symptomatic of the underlying disease process, i.e. hypoglycaemia, chemical intoxication, epilepsy and brain damage (Anonymous, 1978). It may also occur in virtually every variety of mental disorder. Since psychiatric services in Kuwait, currently provided by a single hospital, are still in their early days of development, it is likely that many psychiatric patients end up attending general hospital clinics. The same can be said about the patients suffering from alcohol- and drug-related problems, another frequently cited group of patients involved in violent incidents against doctors (Cembrowicz and Shepherd, 1992).

The National Union of Public Employees (1991) showed that 87% of health service staff were worried about, and only 3% of them had been trained to deal with, violence at work. Of our doctors, 70% reported that they were worried about violence and 5% said they had received training to deal with violence at work. Fewer of our doctors were worried because most of them had experienced incidents which did not involve physical assaults. Although just under two thirds of our doctors reported having been advised to report all violent incidents, reporting was neither obligatory nor did formal protocols exist for this purpose. This may explain why in only three out of possible nine occasions involving physical violence was the offender charged by police.

The consequences of aggression against doctors can have far reaching implications. First, they can suffer from a wide range of psychological disturbances. Second, the effects of violence on doctors may impair their ability to make rational clinical decisions. Third, overtaken by his/her inner feelings of anger and frustration, the doctor at times, inadvertently or otherwise, may resort to injudicious clinical procedures. The margin of error in some clinical situations may be extremely narrow and a trivial error of judgment can have fatal consequences. Every effort, therefore, should be made to prevent violent incidents and arrangements should be made for doctors to handle potentially violent situations, likely to arise from time to time at their workplace.

Prevention of violent incidents

The UK Health and Safety Commission report identified violence directed towards staff as a particular concern and made recommendations concerning training and support for staff (Health and Safety Commission, 1987). Some American hospitals employ routine weapon screening of patients using metal detectors (Pane et al, 1991). The presence of skilled security staff can act as deterrent and increase staff morale. Security measures such as unconcealed close circuit television with 24-hour video recording may minimize the chances of vandalism and is also helpful

TABLE 4.
Attitudes of doctors towards violence (*n*=100)

Concern	Yes
Worried about violence at work	70
Advised to report violence at work	61
Trained to deal with violence	5
Training to deal with violence useful	81
Offender charged following violence against you	3

for providing evidence afterwards, particularly in criminal cases. Recording and documentation of all violent incidents should be obligatory and formal protocols should exist at all medical sites.

Restricting the number of patients' companions, constituting more than one third of the aggressives (Hobbs, 1996), may be particularly helpful. A major priority now is the provision of training for doctors on the avoidance and management of potentially aggressive situations. Finally, attempts should be made to reduce lengthy waiting times and the patients should be kept informed of the likely waits and have explanations provided.

Measures to deal with violent situations

The most effective way of minimizing the psychological effects following a violent incident is to follow an early debriefing model employing counsellors with specialist skills (Caldwell, 1992). Early counselling has also been shown to reduce the amount of subsequent sick leave (Schnieden and Maguire, 1993). Psychological recovery is accelerated if, soon after the incident, the difficult feelings related to the episode can be talked through. These feelings may include anxiety, guilt, fear, and depression (Raphael and Middleton, 1988).

Recording of violent incidents should be obligatory and formal protocols should exist for documentation of violent episodes. To record an incident serves as an outlet for feelings of anger and bewilderment which are unleashed through being a victim of violence. A major priority now is provision of training for doctors on the avoidance and management of potentially violent situations.

Training should encompass awareness of warning signals, e.g. body language that can precede an aggressive outburst. Rapid breathing, shouting or chanting, sudden movements, flared nostrils, staring eyes, an aggressive stance, pointing and pacing are all warning signs. Communication skills training could help doctors defuse such situations and control their own emotions. Finally, in these days of 'charters' perhaps doctors deserve one, and it is about time that the general public understand the risks and enter the debate.

KEY POINTS

- An increasing number of doctors experience violence at work.
- Verbal insults and the imminent physical violence are the commonest form of aggression and the risk of sustaining violent injury remains low.
- Some of the consequences of the doctors being exposed to violence include psychological disturbances, and depression, sleeplessness, reliving the experience, fearfulness, and taking time off.
- Most of the doctors are worried about violence at work and consider training to deal with potentially violent situations as useful.
- Presence of skilled security staff, reducing lengthy waiting time, restricting the number of companions with the patients, and unconcealed close-circuit television monitoring are some of the measures likely to prevent violent incident at work.
- Early counselling, formal documentation, involvement of police in incidents involving physical violence, and training of doctors to handle potentially violent situations can minimize psychological sequaelae of violence.

CONCLUSIONS

A considerable number of doctors experience violent incidents at work. Severity of violence is difficult to quantify and there are few, if any, instruments available to measure the degree of violence against doctors. Extrapolation from previous studies is therefore difficult.

Our findings suggest that 1 in 11 doctors experienced physical violence at work. Moreover, incidents involving physical assaults on doctors constituted about 5% of the overall reported violence. Most of the doctors experiencing violence suffer from some kind of psychological disturbance and a substantial number of them remain worried about violence at workplace. The whole issue of violence against doctors needs to be systematically addressed through well-planned, methodologically sound studies. The need for implementation of explicit studies to prevent violent incidents cannot be over-emphasized. HM

Anonymous (1978) Assaults on doctors. *Br Med J* **i:** 1229–30

Caldwell MF (1992) Incident of PTSD amongst staff victims of patient violence. *Hosp Commun Psychiatry* **43:** 838–9

Cembrowicz SP, Shepherd JS (1992) Violence in the accident and emergency department. *Med Sci Law* **32:** 118–22

Coulson J (1995) Doctors demand training in dealing with attackers. *BMA News Rev* **21(1):** 17

Harrington JM (1990) The health care of health workers: the Ernestine Henry Lecture 1990. *J R Coll Physicians Lond* **24:** 189–95

Health and Safety Executive (1986) *Violence to staff.* IND (G) 692. HMSO, London

Health Services Advisory Committee (1987) *Violence to Staff in the Health Services.* Health and Safety Commission, HMSO, London

Hobbs FDR (1994) Fear of aggression at work among general practitioners who have suffered a previous episode of aggression. *Br J Gen Pract* **44:** 390–4

Hobbs FDR (1996) Aggression against doctors: a review. *J R Soc Med* **89:** 69–72

Income Data Services Study (1990) *Violence Against Staff.* Income Data Services, London

Ministry of Health (1994) *Vital and Health Statistics Abstract.* Department of Statistics and Medical Records, Health and Statistics Division, Ministry of Health, Kuwait

National Union of Public Employees (1991) Violence in the NHS. MW/MB/9/46 *Health Serv News* **9.4.91:** 1–6

Norusis MJ (1990) *SPSS/PC and Statistics 4.0.* SPSS Inc, Chicago, Illinois: 187–93

Pane GA, Winiarski AM, Salness KA (1991) Aggression directed toward emergency department staff at a university teaching hospital. *Ann Emerg Med* **20:** 283–6

Raphael B, Middleton W (1988) After the horror. *Br Med J* **296:** 1142–3

Schnieden V (1993a) Violence at work. *Arch Emerg Med* **10:** 79–85

Schnieden V (1993b) Violence against doctors. *Br J Hosp Med* **50:** 6–9

Schnieden V, Maguire J (1993) *A report on Violence at Work and its Impact on the Medical Profession within Hospitals and the Community.* BMA, London