Effects of the Omagh bombing on medical staff working in the local NHS trust: a longitudinal survey

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This article investigates post-traumatic stress disorder (PTSD) symptoms reported by doctors working in the aftermath of the Omagh bombing. Doctors responding to surveys 4 and 17 months after the incident reported the lowest symptom levels compared with other health service staff, with only 12% (2) above PTSD threshold at 17 months. Junior doctors had higher mean PTSD scores than seniors, although numbers are too small to test significance. Possible explanations are discussed and recommendations made.

INTRODUCTION

The bomb explosion in the small market town of Omagh on 15 August 1998 killed 29 people, including 9 children, and injured over 300, the largest loss of life in a single incident in Northern Ireland (Collins, 2001). The first casualties arrived in the tiny local accident and emergency department within 5 minutes of the explosion and were attended to by the two nurses and one doctor on duty.

As word spread, medical personnel began arriving at the hospital, and several doctors holidaying nearby came in to help. Scores more casualties arrived, presenting with a variety of injuries including limb loss, burns, severe shock, eye and ear injuries, neurological damage and shrapnel wounds. Birchard (1998) records that even the most experienced doctors were shocked by the first sight of the injured and dying. In addition to the horror of the injuries, many of those working had the further stress of not knowing whether their own family and friends had been caught up in the attack (Collins, 2001).

This study examined how the Omagh bombing affected staff within the local health service trust, using surveys to assess symptoms of post-traumatic stress disorder (PTSD) 4 and 17 months after the incident. The data reported here focus on medical staff, updating and extending the 4-month findings reported earlier (Firth-Cozens et al, 1999).

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METHODS

Participants and procedure

Questionnaires were sent to every staff member employed by the local health service trust 4 months after the bombing, including 115 medical staff. The follow-up questionnaire 17 months after the bombing was sent only to those who responded to the first survey. Reminder letters were sent out 2 months after each survey to staff who had not yet responded.

Measures

The 4-month and 17-month surveys included:

Post-traumatic stress disorder: PTSD Symptom Scale – Self-Report version (PSS-SR; Foa et al, 1993), comprising 17 items corresponding to PTSD symptoms defined in the *Diagnostic and Statistics Manual of Mental Disorders* (4th edition) (American Psychiatric Association, 1994). The PSS-SR has good reliability and validity and 86% agreement with the *Structured Clinical Interview for DSM-III-R* (SCID; Spitzer et al, 1987) (Foa et al, 1993). Items are scored from 0 (never) to 3 (five or more times per week/almost always), and PTSD symptom severity was estimated using the total score (max=51).

A diagnosis of PTSD was assigned when DSM-IV criteria for re-experiencing, hyperarousal and avoidance were reached, plus a total score of 18 or above (see Dunmore et al, 1999). This is a conservative method which ensures that symptoms are at least moderate. However, the original, less conservative method reported by Firth-Cozens et al (1999) is also included for consistency.

Involvement in the bombing: A list of possible involvement experiences during the bombing was evolved in consultation with personnel at the scene, and participants ticked those that applied to them. These were combined into three categories of involvement: purely professional, purely civilian, or both professional and civilian, and finally a dichotomous involved *vs* not-involved variable was calculated.

Help-seeking: Staff were asked where, if anywhere, they had gone for help as a 'direct result of the bombing that you would not otherwise have needed'. They were asked to record what they felt had best helped them cope with their experiences and why.

Respondents also provided background information about their age, gender, profession and grade. 'Junior' doctors were house officers or senior house officers, and 'seniors' were consultants.

RESULTS

Thirty-five per cent of medical staff (n=41) completed the first survey, and 32 had been involved in the incident, of

which 25% (8) scored above the threshold using the original criterion (Firth-Cozens et al, 1999). Of those who responded to the first survey, 20 (49%) returned the follow-up. Five no longer worked for the trust (four of these were junior doctors). There were no significant differences between those who returned the follow-up questionnaire and those who did not in terms of age, gender, seniority, involvement in the bombing or PTSD scores. The small number makes statistical analyses impossible in most cases; however, descriptive statistics are reported.

Of the doctors who responded to both surveys, ages ranged from 24 to 57 years, with seven doctors being junior grade. Seventeen months after the bombing 7/20 (35%) of the doctors continued to provide medical care for those injured in the attack. Three reported that they felt mild distress at providing this care and one considerable distress.

Involvement and PTSD symptoms

Seventeen of the doctors (85%) were involved in a professional capacity, providing care for the injured following the Omagh bombing. One doctor reported working for 48 hours after the bombing without going home. Excluding this extreme case, the average number of hours worked continuously following the bomb blast was 7.8 hours, ranging from 1 to 12 hours.

Individuals' reactions to the bombing varied greatly. This is reflected in doctors' comments when they were invited to write about their experiences during Omagh.

'Unique experience, preferably only instance to be experienced during lifetime.'

'This was only one of many less "notorious" episodes over the years, e.g. other bombs, accidents etc. In my mind some of those individual episodes have had even more distressing effects – yet there was never teams of counsellors running to our aid – it was get on with the job the next day! Yet we have survived somehow – helping each other.'

'I was totally unprepared for the scale of the disaster.'

Of those who responded to both surveys and who were involved, only one doctor met the conservative criteria for PTSD 4 months after the bombing, while two did so at the 17-month survey. Both doing so were juniors. Using the usual, less conservative criteria, three doctors (18%) met criteria at 4 months and four (24%) at 17. One senior doctor met this criterion at both points.

Doctors reported the lowest PTSD symptom means compared with other involved staff groups within the trust at 4 months (Luce et al, 2002) and 17 months after the incident. For example, their mean symptom scores (4 and 17 months) were 5.94 and 5.43, compared with nurses at 10.77 and 7.08 and managers at 9.21 and 10.21.

Seventeen months after the bombing, six (30%) doctors said they felt emotionally upset when reminded about it; five (25%) said that they tried not to think about, talk about or have feelings about the bombing; four (20%) reported having upsetting images about the bombing coming into their head when they did not want them to and five doctors said they sometimes felt as though they were reliving the bad events of that day (i.e. acting or feeling as if they were happening again).

Junior doctors involved in the incident (n=5) had considerably higher PTSD symptom scores than seniors (n=12) at 4 months (9.80 *vs* 4.33) and 17 months (13.20 *vs* 2.17), although these did not reach statistical significance. PTSD symptoms decreased substantially among senior doctors between the surveys, while they increased among juniors. Age was significantly negatively correlated with PTSD symptoms at 17 months (–0.54, P<0.03), i.e. older doctors tended to have fewer PTSD symptoms.

Seventeen months after the bombing, six (30%) doctors felt that work was more tiring than before the bombing (two – less tiring), three (15%) felt they were doing their job less well than before (two – better than before) and four (20%) had more desire to quit (two – less desire). Overall enjoyment of work had decreased for six (30%) and increased for one doctor (5%). More negative attitudes towards work were associated with higher PTSD scores.

Help and coping: The majority of doctors involved during Omagh (11/16 – one missing set of data for these items) had sought some help by 17 months after the bombing as a direct result of the bombing. This was largely from non-professional sources, such as friends and family (8), work colleagues (8) and religious sources (4). Professional help was sought by only three doctors and from the following sources: GP (1), occupational health (1), psychologist (1) and psychiatrist (2). One doctor who scored above the threshold for PTSD at 17 months had sought no help at all.

In response to the open-ended question about coping, doctors identified that having the chance to discuss their trauma-related experiences and to express their emotions, generally in informal settings, were important in helping them cope:

'Being very open about it, talking with friends … thus "getting it out of our systems" or beginning to soon after the event.'

'Discussion/support from colleagues at work in hospital.'

'Talking it through with colleagues. As a member of staff, we attended a compulsory counselling session. I felt self-conscious rather than helped.'

Good teamworking was seen as important and as a source of satisfaction:

'In other words we get together as an excellent team of people doing our respective jobs.'

'Satisfaction with the way the team that I worked with coped.'

Doctors thought that their training and also previous experiences of similar atrocities (e.g. the Enniskillen bomb) had helped them, e.g.:

'It clarified what was medically (i.e. surgically) necessary in such a situation, and the need to concentrate on the physical injuries initially (and their priority and urgency) in order to attempt to cope as best as possible.'

On the other hand, one senior doctor found his lack of recent clinical experience very distressing:

'It is years since I have had to deal with any sort of trauma cases and I felt very inadequate. The relatives seemed to want things done and I couldn't help as much as I'd have liked to because I didn't have the training or recent clinical experience to do so.'

Another doctor said:

'One always feels one could have done better',

a sentiment that was echoed by many staff members, regardless of their level of involvement, experience or profession.

DISCUSSION

The general assumption that professionals caring for victims of trauma are immune from experiencing distress as a result (Bamber, 1994) is gradually being contradicted (e.g. Marmar et al, 1999); however, very few studies have looked at doctors (Firth-Cozens et al, 1999). Although the majority of staff do not experience significant distress after such events, this image of professional helpers as in control and unaffected may actually add to the pressures on staff and make acknowledgement of problems and help-seeking more difficult.

The doctors who responded to the surveys were the staff group least affected by this event in terms of post-traumatic symptoms, despite their high levels of exposure to traumatic scenes, horrific injuries and the long hours dealing with the casualties.

The reasons for their lower scores may be manifold. First, medical staff were less likely than other staff groups to have had some civilian involvement during Omagh (i.e. to have been shopping at time or having friends or relatives injured or killed); a context that was associated with higher PTSD symptoms (Luce et al, 2002). Another possible factor may be the nature of medical work itself, with doctors more likely than other staff groups (excepting perhaps nurses) to have previously faced such injuries, albeit on a smaller scale.

The training and professional skills of doctors enable them to act immediately, providing practical help in the face of such chaos and pain. These abilities may reduce the subjective feelings of helplessness, commonly a precursor to post-trauma reactions. Being able to see the event as a medical problem to which, as a doctor, one can competently respond would seem to reduce feelings of helplessness and horror and was cited by doctors in this study as helpful. The finding that managers, who had less direct contact with the horrific scenes of the day, had higher PTSD symptoms may support this supposition since they lacked a 'hands-on' role.

Linking into this, the degree of experience seems to play a role since the junior doctors, with less experience and fewer skills, are clearly more at risk and may, like managers, have felt more helpless. McCarroll et al (1996) reported that experienced dentists found handling bodies significantly less stressful than inexperienced, and older age correlated with less distress. Even though most doctors may feel they could have done better, the anguish felt at the time by the doctor who had no recent clinical experience, and the subsequent self-blame, reflects a self-perceived failure to meet expectations and provide adequate help.

Although some doctors wrote about the importance of their past work in trauma settings, not all past experience is helpful. Firth-Cozens et al (1999) found that doctors who had experienced traumatic events before Omagh which had caused them to feel fear had raised levels of PTSD at 4 months.

Working as part of a cohesive and successful team was seen as helpful by all staff groups, both during the incident and in the following months. It may be that junior doctors, in addition to lacking experience, may not feel an established part of a team. They can often move on to another post after such events, perhaps with little monitoring or ongoing support.

CONCLUSIONS

As a result of this study of the aftermath of the Omagh bombing, the following conclusions can be drawn for doctors in traumatic events:

- Even those working professionally may experience distress after traumatic incidents. Doctors should be trained about post-traumatic reactions, including the range of possible, and usually normal, reactions and feelings after such events and when such reactions might become problematic.
- Particular doctors may be more vulnerable to post-trauma reactions, e.g. those with previous traumatic experiences and psychological problems (Firth-Cozens et al, 1999), or the inexperienced (McCarroll et al, 1996). Although it is not possible or desirable to shield them from such events altogether, these doctors may need more help and support at the time and afterwards.
- Teamworking is important so that doctors are not left feeling that they are working in isolation.

During traumatic events:

- Whoever is in charge of the response to the event should attempt to reduce feelings of inadequacy and subsequent guilt or self-blame. If possible, they should match clinicians to competencies and give positive feedback and reassurance to those involved.
- Inexperienced doctors should have input and support from more experienced colleagues.

After traumatic events:

- Doctors will need reassurance that they did their best in a difficult situation.
- They need to be reminded that, in the short term, psychological symptoms (e.g. re-experiencing, nightmares) are common and often part of the 'normal', healthy recovery process.
- Open discussion about events and feelings will help ensure that doctors are not left to ruminate over 'faults'. Recent evidence (Rose et al, 2001) suggests that forced discussion after traumatic events (in the form of 'psychological debriefing') can actually harm some individuals and interfere with natural

recovery processes. Procedural or professional debriefing after incidents by senior staff is often necessary and useful, while more in-depth and personal discussion is generally best received in informal groups and settings.

- Problems can take a long time to surface. Brewin (2001) recommends assessment of staff some time after an event (4–8 weeks) when those still suffering psychological distress should be offered appropriate help, although there is evidence that PTSD may emerge much later (Luce and Firth-Cozens, 2000).
- Some doctors may need a reduced workload as they recover.
- Doctors who do want or need professional help or support will need demonstrably confidential help (especially in health-care settings where clinicians may know the helpers) and also sufficient time to attend. **HM**

This study was commissioned by the Sperrin Lakeland Health and Social Care Trust.
Conflict of interest: none.

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KEY POINTS

- Doctors' reactions to the event varied considerably.
- Doctors reported the lowest post-traumatic stress disorder symptom scores compared with other staff groups.
- Junior doctors reported higher symptoms than seniors.
- Only three doctors sought professional help as a result of the bombing.
- The chance to discuss their feelings and trauma-related experiences with friends and colleagues, good teamworking and previous relevant experience were seen as most helpful for coping with the event.