Operation Orderly - Prevalence and Degree of Distress Among Military Personnel Following Their Ambulance Experiences in London District

Lt Col A B Gillham
MA, MRCP, MRCGP, MRCPsych, RAMC
Lecturer in Military Psychiatry

Brig P Abraham
QHP, MA, MRCS, LRCP, FRCpsych, DTM&H, L/RAMC
Professor of Military Psychiatry
Royal Army Medical College, Millbank, London SW1P 4RJ

SUMMARY: The objective of this study was to determine the prevalence and degree of distress among military personnel following their experiences during Operation Orderly in London District. A questionnaire was distributed at the end of the deployment which enquired about distressing experiences. The General Health Questionnaire (GHQ-28) and the Impact of Event Scale (IES) were included to provide an objective measure of the distress. Thirty two per cent of respondents admitted to distressing experiences, of these a subgroup (20.5%) who were more severely distressed welcomed the opportunity to discuss their experiences.

Introduction
In November 1989 there was a national strike of ambulance personnel which started in London. Following a request for military assistance by the responsible Civil Ministry, an operation – Operation Orderly – was mounted under the Ministry of Defence (Army) to provide an emergency ambulance service in those districts effected by the strike. Medically trained personnel and drivers from all three services, the majority from the Army, were rapidly trained and deployed in military ambulances. The operation commenced on 3 November 1989 and continued until 16 March 1990 when the strike ended.

In London District, following the deployment of military personnel, the Director of Army Psychiatry was requested to provide a supportive service for individuals who, it was recognized, could become distressed by incidents in which they were involved during their ambulance duties. The community psychiatric nurses from the Queen Elizabeth II Military Hospital organised a team to provide this support. The team was attached to the District Headquarters and visited the military ambulance stations throughout the dispute. This enabled them to discuss informally any problems that military personnel were having and some individuals used these visits to ventilate their feelings. Five soldiers required more formal counselling following traumatic incidents in which they had been involved; none of these was assessed as requiring more than one counselling session which was given at the ambulance station while the soldier remained on duty.

It is known that the experiences of rescue personnel during disasters can have a dramatic impact (1). There is evidence of both short and longer term psychological disturbance (2,3). The response of an individual appears to depend on a number of factors which include the nature of the stressful event, such as exposure to death and mutilation, and previous experience and training (1,3,4). It therefore seemed probable that military personnel other than the five already mentioned may also have been distressed by their experience and that some of these would welcome the opportunity for further discussion.

This study set out to determine the prevalence and degree of emotional disturbance among military personnel following their ambulance duty, in doing so it seemed important to provide an opportunity for discussion to those distressed individuals who would welcome it.

Method
A questionnaire was designed for distribution at the end of the operation. This requested demographic information (name, rank, number, age, marital status, length of military service, unit, role (driver or medic), grade of medical training, previous relevant experience and length of ambulance duty) and asked three questions about distressing experiences. Respondents were asked:

a. whether they had any particularly disturbing or distressing experience during their ambulance duty and, if so, to describe them; positive responders were asked two supplementary questions:
   b. whether they had been able to discuss their feelings about this with someone and, if so, whom, and
c. whether they would welcome the opportunity for further discussion about their distressing experience.

The questionnaire also included the GHQ-28 (5) and IES (6). These are well recognized instruments for measuring emotional disturbance following traumatic experiences (7); they are simple self administered questionnaires. A score of 5 on the GHQ-28 gives a sensitivity and specificity of over 85% for identifying the presence of psychological morbidity in non patient groups. The IES was developed to measure symptoms...
following psychological trauma; it is a 15 item scale that measures intrusive and avoidance symptoms that relate to a traumatic event. A score of less than 10 would indicate low stress whereas a score of 30 or more would indicate high stress (8).

The questionnaires were distributed to all military ambulance personnel at their ambulance stations on the last day of the operation by the liaison officers. Bandsmen who had been employed on ambulance duty but were not at work on the last day received their questionnaire through their unit internal mail. The introduction to the questionnaire made it clear that participation was voluntary and that all information given was 'medical in confidence'.

Results

Of 475 individuals who received the questionnaire 258 (58%) responded and 256 were useable in the analysis. Of the respondents 62 came from units normally involved in the clinical care of patients (hospitals or medical centres), but the majority came from units not normally involved in clinical work, but for whom their war role could involve the care of casualties: 64 from field medical units, 90 bandsmen and 39 drivers from Royal Corps of Transport units. The mean age of the respondents was 25.7 years (range 32.0), mean length of service was 7.7 years (range 22.9) and the mean duration of the ambulance duty was 82.3 days (range 128). A minority (86) had previous experience that they thought was relevant but the majority (162) had not.

Nearly one third (32.4%) reported distressing experiences; 83 individuals reported a total of 109 distressing experiences (Table 1). The majority (73.5%) of this distressed group were able to discuss their feelings about this with someone: a professional colleague (59%), or someone from their social network (20.5%) and sometimes both (20.5%). Of the 83 reporting distressing experiences 17 (20.5%) welcomed the opportunity for further discussion and an appointment was arranged for them to be seen by a Community Psychiatric Nurse or General Practitioner; 6 of this subgroup of 17 had been previously unable to discuss their feelings about their experience.

The mean GHQ-28 and IES scores of the subjects grouped according to their responses to the questions about distressing experiences are shown in Table 2. The group that reported distressing experiences had significantly higher scores than the group that did not report them (Table 2a). The subgroup of distressed individuals that were able to discuss their feelings about their experience had lower scores than the subgroup that was unable to discuss their feelings, but only the IES was significantly different (Table 2b). The subgroup of distressed individuals who welcomed the opportunity for further discussion had significantly higher scores than the subgroup of distressed individuals who did not welcome further discussion (Table 2c).

There was a significant (p<0.0001) positive correlation between the GHQ-28 and IES scores and the number of reported distressing experiences. The Spearman rank correlation coefficient for the GHQ-28 was 0.30 and for the IES was 0.40. On the Mann-Whitney rank test significantly higher GHQ-28 and IES scores were produced by ambulance personnel who experienced involvement with sudden infant death (for GHQ-28 p<0.01, for IES p = 0.02), other child death (for

### Table 1

<table>
<thead>
<tr>
<th>Experience</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seeing 'sudden infant death'</td>
<td>8</td>
</tr>
<tr>
<td>Seeing other child death</td>
<td>6</td>
</tr>
<tr>
<td>Seeing adolescent/young adult death</td>
<td>2</td>
</tr>
<tr>
<td>Seeing mutilated/burned/decomposed body</td>
<td>13</td>
</tr>
<tr>
<td>Seeing other death</td>
<td>12</td>
</tr>
<tr>
<td>Having failed to resuscitate</td>
<td>1</td>
</tr>
<tr>
<td>Seeing deprived elderly people</td>
<td>8</td>
</tr>
<tr>
<td>Seeing a victim of child abuse</td>
<td>1</td>
</tr>
<tr>
<td>Dealing with bereaved relatives</td>
<td>6</td>
</tr>
<tr>
<td>Other experiences (eg stillbirth, meningitis, fit)</td>
<td>22</td>
</tr>
</tbody>
</table>

### Table 2

<table>
<thead>
<tr>
<th></th>
<th>GHQ-28</th>
<th>IES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distressing experience</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NO (n = 152)</td>
<td>1.6 (SD 2.6)</td>
<td>3.8 (SD 4.1)</td>
</tr>
<tr>
<td>YES (n = 83)</td>
<td>3.8 (SD 4.1)</td>
<td>13.7 (SD 14.6)</td>
</tr>
<tr>
<td>Mann Whitney rank test</td>
<td>p&lt;0.001</td>
<td>p&lt;0.001</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Able to discuss feelings about distressing experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO (n = 21)</td>
</tr>
<tr>
<td>YES (n = 61)</td>
</tr>
<tr>
<td>p = 0.43*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Would welcome further discussion about distressing experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO (n = 64)</td>
</tr>
<tr>
<td>YES (n = 17)</td>
</tr>
<tr>
<td>p&lt;0.001</td>
</tr>
</tbody>
</table>

*Not significant
GHQ-28 $p = 0.04$; for IES $p < 0.01$), mutilated corpses (for GHQ-28 and IES $p = 0.02$) or who had been involved in a failed resuscitation attempt (for GHQ-28 $p = 0.01$; for IES $p = 0.02$).

There was no significant association between previous experience or type of unit and reporting distressing experience (chi-squared test, $p > 0.5$), nor were there any significant differences in the GHQ-28 and IES scores between groups with or without previous experience (Mann-Whitney rank test, $p > 0.05$), nor between different types of unit (Kruskal-Wallis rank test, $p > 0.05$).

Discussion

The study confirms that, when asked, military personnel did admit that they were or had been distressed by their experiences. On examining the list of experiences given as distressing this is not surprising. The majority of those that admitted distress were able to discuss their feelings with someone and did not feel the need for further discussion. However a small group felt distressed and welcomed the opportunity for further discussion when it was offered.

The difficulty with the concept of ‘distress’ is that it is ill-defined. It is a reaction that an individual may accept and deal with alone or work through with the support of colleagues, family and friends with perhaps minimal, temporary effect on normal functioning; on the other hand the ‘distress’ may cause a reaction that causes the individual or those around him to seek professional assistance from mental health professionals as in the case of the 5 individuals counselled during the Operation by the team of community psychiatric nurses. In these 5 cases the service offered by this team was welcomed by the individual and the Command and enabled the individual to continue functioning; this team provided a natural extension of the support provided by the military organization. However mental health professionals are also concerned with psychiatric morbidity that may be unrecognized or delayed. They hope to prevent continuing morbidity. This is a more difficult task and a limited attempt was made on Op Orderly by offering an appointment to those individuals who would welcome it. By this simple intervention a small group of individuals were identified who were, as measured by the GHQ-28 and IES, more severely distressed and for whom the opportunity to talk met a need, enabled an assessment to be made and provided the means for a therapeutic intervention. The majority of those who had distressing experiences were able to discuss these with colleagues, family and friends and though there is come evidence from the study that this is helpful it is also not always enough.

Although previous experience and training have been reported to, reduce stress reactions in those exposed to stressful experiences (4,9), in this study no influence was demonstrated. The normal role of those employed in the clinical role in military medical establishments did not give them any advantage over the bandsmen, or medics and drivers from field units, in vulnerability to distressing incidents. It may be difficult to demonstrate such differences unless the stresses are overwhelming. Also on Op Orderly the military ambulance personnel found themselves in situations where they were the only available ‘expert’ performing under public scrutiny. This is quite unlike the normal clinical situation where other staff are available to share responsibility in a more easily controlled clinical environment. Although individuals may vary in their vulnerability to stressful events, this study indicates that involvement with infant and child death, mutilated corpses and a failed attempted resuscitation were particularly stressful. The stressful nature of contact with child death and mutilated corpses has been reported before (10). Although the number of reported distressing experiences has a positive correlation in this study with the GHQ-28 and IES scores, suggesting that the degree of distress is related to the number of distressing experiences, this positive correlation may reflect the reverse possibility: that distressed individuals report more experiences as distressing. Unfortunately without knowing how the experiences of the non distressed group compared with those of the distressed group this question cannot be answered.

Although the response rate of 58% is not as high as the investigators would have preferred, it compares favourably with similar questionnaire studies on military non patient populations. O’Brien (11) used the GHQ-60 to investigate psychiatric morbidity in an army unit and obtained a response rate of 67%; Jones (12) used a questionnaire to investigate ‘the emotional effects of recovering human remains’ by US Air Force personnel and obtained a response rate of 38%. It is not known what bias is involved between those who answered the questionnaire and those who did not; the responding population was a mature group of relatively long service.

Conclusion

Despite the limitation of this type of questionnaire study it does highlight some simple but important points. Military personnel do get distressed by some of the tasks they have to perform and this distress may reach a level for which a simple intervention by a mental health professional is appropriate. Talking about distressing events with colleagues may cause amelioration of distress but when it does not, having a mental health professional as part of the organization is beneficial. A military mental health professional should be involved with military personnel during their predeployment training, preparing them for the potentially stressful aspects of the operation and providing early support. It is suggested that such involvement by mental health professionals should be provided by members of field psychiatric teams, ideally deployed in support of units to whom they are already known, from involvement in exercises as part of normal military training.
Acknowledgments

The authors wish to thank Colonel D M Whitfield L/RAMC, Lieutenant Colonel G A Sunderland RAMC, Captain S Thornton RAMC, and his Community Psychiatric Nursing colleagues, for their support in carrying out this study, Mrs S Sims and her assistant, Ms J Davis, who willingly provided statistical advice and performed the data analysis and Mrs Myra Davis and Mrs Matilda White for secretarial assistance.

REFERENCES

Operation Orderly - Prevalence and Degree of Distress Among Military Personnel Following Their Ambulance Experiences in London District

A B Gillham and P Abraham

*J R Army Med Corps* 1992 138: 23-26
doi: 10.1136/jramc-138-01-06

Updated information and services can be found at:

http://jramc.bmj.com/content/138/1/23.citation

**Email alerting service**

Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

**Notes**

To request permissions go to:
http://group.bmj.com/group/rights-licensing/permissions

To order reprints go to:
http://journals.bmj.com/cgi/reprintform

To subscribe to BMJ go to:
http://group.bmj.com/subscribe/