Potential Psychological Problems of Army Medical Services Personnel in Combat with particular reference to The Territorial Army

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SUMMARY: In the event of a major European war the Army Medical Services (AMS), of whom the majority would be drawn from the Territorial Army (TA), would be exposed to a unique combination of stresses. Ways of reducing the effects of these are discussed.

IDENTIFICATION OF POTENTIAL STRESSORS FOR AMS PERSONNEL IN WAR

Psychological Problems of Civilian Doctors and Nurses

Civilian doctors and nurses experience many stresses, some of which are common to all professional groups¹ and some due to the inherent nature of their work².

The harmful effects of stress on doctors can be seen on many indicators of distress. Studies have shown that doctors, and in some cases other health workers, have high rates of marriage breakdown³, suicide⁴, alcoholism⁵, psychiatric disturbance³ and drug addiction. The adverse effects of stress on work have also been documented⁶.

The ways in which doctors and nurses attempt to cope with these stresses may result in behaviour which is ultimately harmful to patients. "Burnout" has been described as a loss of concern for people, an emotional exhaustion that involves cynicism and dehumanised perceptions of patients⁷.

In hospitals with low morale among nurses, Revans⁸ found that patients had slower recovery rates, suggesting that the quality of care given to patients was adversely affected by the nurses' attempts to deal with their own anxiety.

In the event of war, members of the AMS would experience the psychological problems of civilian doctors and nurses. They would also be exposed to many of the stressors affecting all combat soldiers.

In some senses the stresses in a medical unit are worse than for the front-line soldier. All the trauma of the battle is funnelled through the AMS, who have to support other troops, both physically and emotionally. They deal with the failures of battle, never the successes. Undoubtedly, AMS personnel have to work against the most horrific and disturbing aspects of war, that is, injury, mutilation and death on an unimaginable scale.

Ethical Dilemmas

For the civilian doctor or nurse, there must be total dedication to the welfare of the individual patient, even at the expense of institutional demands. In war operational requirements may override those of the individual. It was reported⁹ that during the Second World War many hospital staff commissioned into the AMS found great difficulty in adjusting to this reversal of priorities. During peacetime it is customary to give the highest treatment priority to the most severely injured or ill. During combat when there are massive casualties, patients whose chances of recovery are poor, will be given low priority.

If conscripted troops were ever used in a future war, some would experience severe inner conflict about their military role. Men who cannot adjust to Army life may develop physical and psychological breakdowns as an unconscious means of escape from the unendurable.

Role Conflict and Ambiguity

Role conflict is defined as the "simultaneous occurrence of two or more sets of pressures such that compliance with one would make more difficult compliance with the other"¹⁰. The role of military chaplains is often said to contain much inherent role conflict. Role ambiguity is defined as lack of clarity or predictability associated with a given role. The role-incumbent is unsure of the scope of his responsibility.

Kahn and others¹⁰ found that role conflict had many damaging effects on behaviour. They concluded that "role conflicts are costly for the person in emotional and interpersonal terms. They may also be costly to the organisation, which depends on effective co-ordination and collaboration within and among its parts"¹⁰.

Separation from Home and Normal Social Roles

Separation from the security and comforting per-

manence of home can be a severe stressor¹¹. "Home-sickness" will particularly affect younger personnel, who may never have left home for long periods before. Units in BAOR will have the added stress of being stationed in a foreign country with language, cultural and dietary difference.

It should be remembered that most TA personnel derive their social status and sense of worth from their civilian job rather than their TA rank. Civilian status and military rank do not always coincide. Personnel in this position may take some time to adjust to their military status and those who occupy a higher status in civilian life may be initially resentful of the military hierarchy.

Hours of Duty: Sleep Deprivation

In a military hospital in wartime, staff may have to work much longer hours than usual, depending on the volume of casualties and staffing levels. Long hours of duty, provided the work is not physically gruelling, are not a source of stress. However, adequate rest periods are essential.

A number of experiments have attempted to assess the effects of long hours of work and reduced sleep on performance. An Army Personnel Research Establishment (APRE)¹² study prevented soldiers from sleeping for 3½ days. Cognitive and vigilance tasks were badly affected, although well-learned tasks were performed satisfactorily. Mood was lowered and fatigue experienced by all. The same group were then allowed 4 hours sleep a night over 6 nights. By the end of this time performance had almost returned to its pre-experimental level. This suggests that people can function adequately on 4 hours sleep a night, but it takes several days for the body to adjust.

In another experiment Hartman and others¹³ found that aviators on extended and stressful missions required more sleep during and after the mission than whilst on regular duty. Hence it appears that fatigue is in part a response to stress. The APRE study did not include stress. It would have been useful to know whether extra sleep would have been required had stress been introduced.

Friedman and others¹⁴ reported that doctors deprived of sleep felt weak, nauseated, unable to focus their eyes, fatigued and sad. They made many more errors interpreting electrocardiographs than a control group. Friedman noted that doctors may appear to be working satisfactorily after many days without proper sleep, but they are likely to make many more mistakes. There are individual variations in how people adjust to inverted night and day cycles, and some may be unable to adjust at all. There is much evidence that night-shift workers experience impaired performance in tasks involving

vigilance, complex skills, short-term memory and long-term retention of material¹⁵.

Evidence suggests that 8 hour continuous rest periods will probably result in the best performance and morale over a long period. It seems that 4 hour rest periods are about the minimum that can be tolerated without severe performance decrements. Ideally, sleep should be taken at the same time each day to allow maximum circadian rhythm adaptation. It should be noted that impairment of function is not necessarily subjectively stressful. Indeed, if perceptions are dulled the nurse or doctor may not be aware of the extent of their incompetence, which can be an added source of danger for patient.

Physical and Environmental Stressors

In a comprehensive review article Kubala and Warnick¹⁶ identified a large number of physical and environmental stressors to which the combat soldier might be exposed. Not all of these will be relevant to all types of medical units, but any of them could be significant causes of stress for AMS personnel. They include heat, cold, humidity, noise, vibration, fatigue, toxic substances, isolation, crowding and lack of privacy. Working in Nuclear, Biological and Chemical (NBC) protective clothing for prolonged periods would cause physical discomfort and substantially reduced efficiency.

THE ADVERSE EFFECTS OF STRESS ON AMS PERSONNEL IN WAR

Selye¹⁷ described the individual's reaction to threat as stress. On the basis of observational studies he described a three stage General Adaptation Syndrome. The first stage, awareness, is accompanied by sympathetic nervous system activation—tachycardia, insomnia, tremors etc. During the second stage, resistance, this activation ceases and maximum adaptation occurs. The third stage, exhaustion, arises when stress persists, and physical and psychological morbidity occur.

Effects on Performance

Many studies have demonstrated that anxiety produces a decrement of performance, but that such decrements can be minimised by appropriate training.¹⁸ It is generally thought that skilled performance is critically affected by arousal which is in part a function of stress¹⁹. Mild stress is likely to improve performance, while severe stress is likely to degrade performance. There are, of course, wide individual variations in response to stress. This problem is particularly relevant to AMS personnel, as any deterioration in performance could endanger patients' lives.

Anxiety

Anxiety is a fairly common response to stress. It is particularly important in combat to be able to recognise the limitations it imposes on efficient performance and to distinguish it from battle-shock. The latter usually requires treatment in the divisional administrative area whereas anxiety, unless severe, would normally be dealt with within the unit.

Anxiety is a "transitory emotional state — characterised by feelings of tension and apprehension and heightened autonomic nervous system activity"²⁰. Its presenting signs are complex and variable and will usually include cognitive, affective and physiological components²¹.

Depression and Suicide

Suicide represents the most serious failure to cope with stress. It occurs less frequently in war than in peacetime, although the number of soldiers listed as killed on active service who die as a result of suicide is not known. As discussed earlier health-care workers have a much higher suicide rate than other professional and technical groups and suicide among doctors is known to have occurred during the Second World War²².

It is important that the early signs of depression are recognised so that it can be treated before the sufferer becomes incapacitated. According to Seligman²³, depression is most commonly associated with feelings of helplessness and futility. Separation from home and family can also contribute to depression. Abraham²⁴ pointed out that bereavement may be important in generating depression. In a cohesive unit there is inevitably loss of close companions, and adjustment has to be made without a chance to fulfil the human need to mourn. Abraham suggested there may be a case for employing guided mourning in treatment.

Psychosomatic Disorders

Linford Rees²⁵ described psychosomatic disorders as "a group of disorders manifesting a physical lesion in which emotional and physical factors may exert a causative role". Emotions may precipitate an attack of the illness, may increase the severity of an attack already present, or may prolong its duration. There is no simple relationship between stress and particular psychosomatic disorders. Other factors such as personality, early learning experiences, reactivity of the autonomic nervous system and vulnerability of a particular organ all interact with the stress to produce pathological changes in a specific organ.

The occurrence of both pleasant and unpleasant social changes has been studied in relation to illness. These studies see the adjustment to "life events" as

a component of stress. For example Rahe²⁶ found that more life events occurred in the six months prior to psychosomatic illnesses than for a control group. The occurrence of war must be seen as a major life event.

When presented with patients suffering from disorders known to have a psychosomatic component, the MO needs to deal with the psychological component as an integral part of the treatment. The development of a psychosomatic disease may occasionally precede complete psychiatric breakdown. It should also be remembered that members of the AMS have considerable scope to mimic diseases unconsciously.

Alcohol Abuse

As mentioned earlier, alcoholism has been shown to be a problem among doctors, although no evidence has been found that alcoholism increases in time of war. It seems likely that war removes some of the normal social constraints against heavy drinking, and drunkenness may bring temporary relief from the stresses of combat. However, there would be no time for social drinking in a military hospital, and the demands of the situation would induce an increased sense of responsibility in most people. A drunken doctor, nurse or MA is potentially lethal. Incorrectly performed procedures and wrong treatment decisions could result in a patient's death.

Drug Abuse

The use of drugs by soldiers has been reported in previous wars and was a major problem for the Americans in Vietnam, where marijuana smoking was common²⁷. Not surprisingly, there was a marked inverse relationship between rank and extent of marijuana use. It was noted earlier that civilian doctors and nurses account for a number of drug addicts. In the anticipated rush of casualties during battle, there would be ample opportunity for AMS personnel to steal drugs for self-administration. An increase in tobacco consumption has also been shown to be a reaction to stress²⁸.

Combat Stress: The Nature of Battleshock

This paper is concerned with the stresses of war, which are of greater magnitude than anything experienced in everyday life. Numerous military writers now accept that given enough stress, anyone would eventually break. As Appel and Beebe²⁹ commented "There is no such thing as "Getting used to combat" — Each moment of combat imposes a strain so great that men will break down in direct relation to the intensity and duration of their exposure".

An extreme response to stress is battleshock.

The term "battleshock" is now used to describe inability to fight which does not result from major injury or disease. Despite their diverse forms, it is logical to describe by one name conditions which have a common aetiology in the unique circumstances of battle. These affect stable healthy individuals, and require similar management, which is radically different from that laid down for major surgical cases. The difference lies in the policy, essential for battleshock, of holding and returning to duty even apparently severe cases.

The majority of Army doctors have not encountered battleshock, have little idea how it would appear and are liable to take an over-pessimistic view of the outcome. An Army training film called "Field Psychiatry for the MO" made in 1944, shows several presentations, and it is still very relevant today. Some common presentations would include:

- a. Dazed, depressed or exhausted states, as if drugged, dissociated or in a catatonic stupor.
- b. Hyperexcitability and incapacitating terror.
- c. Opting out by overreacting to minor physical disorders, desertion, indiscipline, drug or alcohol abuse.

Many military writers agree that "the major stress that can erode and destroy a man's courage and lead to mental breakdown is fear"³⁰. However, physical and psychological stresses confront the front-line soldier in combination rather than singly. A team of American psychiatrists³¹ identified other significant causes of stress as frustration, aggression, powerlessness, anxiety, guilt, resentment, grief, loneliness and physical and mental exhaustion.

On the basis of previous comparable conflicts it is estimated that in a war in central Europe 20% of all casualties requiring treatment by the AMS would be battleshock cases, with local variation from 5% - 50%. Some would also be surgical cases. It is likely that many others would be affected in varying degrees without involving the medical services.

The US Army principles of treatment are still "immediacy, proximity and expectancy"³², to which at least one Israeli author³³ would add "brevity". The more battleshock cases are treated as patients, and the further back they are evacuated, the worse they become and the more their numbers swell.

Hence the standard first-aid procedure for all battleshock cases as summarized by Abraham²⁴ includes:

- a. Treatment as early and as close to the forward combat zone as possible,
- b. Treatment as a soldier not as a patient,
- c. Initial period of sleep or rest,
- d. Work under supervision,

- e. Rapid return to original unit, or if not, with a small group to another unit,
- f. Ventilation of feelings, sharing of experiences and coming to terms with events either individually or in groups, and
- g. Rare use of medication.

Levav and others³³ reported that during the Israeli wars there was a higher ratio of psychiatric to physical casualties among logistic troops and support services (including medical services) than among fighting troops. This finding contradicts the traditional belief that fear is the principal cause of battleshock. If fear were critical then fighting troops should have higher battleshock rates than support troops. This study suggests that some of the stresses peculiar to the back-up services eg, feelings of helplessness, frustration and impotence, may be particularly important in the aetiology of battleshock. One senior Israeli MO has commented that of the support services, the medical services had the lowest rate of battleshock. This may be because the medical services were so consistently overworked that they never had time to think about their own problems, or perhaps because occupying a constructive role provides some protection against a psychologically destructive environment.

Staff of Army hospitals are likely to respond to stress in much the same way as combat troops and civilian doctors and nurses, as earlier discussed. The sights and sounds of death and suffering are significant causes of stress for combat soldiers. In this respect AMS personnel have some advantage over troops, as most have at least some experience of seeing injury, illness and death.

PREVENTING AND REDUCING THE ADVERSE EFFECTS OF STRESS

Personnel Selection

Individuals vary in their responses to stressful situations, and this may be associated with personality differences.

A number of personality dimensions have been shown to mediate stress responses. These include:

- a. Self-efficacy³⁴ and helplessness²³
- b. Locus of control³⁵.
- c. Trait anxiety³⁶.
- d. Achievement motivation³⁷.
- e. Field dependence/independence³⁸; and
- f. "Type A" personality³⁹.

There are numerous anecdotes about timid men being heroic in battle and tough men being cowardly. Given the enormity of the stresses experienced, minor personality differences are probably not very predictive of reactions to stress. This accounts for the

failure of attempts to "screen out" susceptible men at pre-service selection.

It is now known that even the most physically and mentally healthy men will break down under the tremendous stress of combat duty. As Appel⁴⁰ concluded "If screening was to weed out anyone who might develop a psychiatric disorder, it would be necessary to weed out everyone". The modern view is that pre-service selection is unreliable, and it can be expected to eliminate only the more obviously unintelligent, unstable and mentally disordered³⁰.

Peacetime Training: Skills Acquisition

TA exercises allow specific skills to be learned and practised in a reasonably realistic, but stress-free environment. The more specific training a man has, the less he needs to worry about performing these functions. He must be confident he has the ability to carry out his professional duties correctly, and this necessitates providing feedback about his actions in the simulated hospital or battlefield. Confidence reduces fear substantially.

It is currently estimated that the AMS depends upon the TA and Army reserves to provide over 80% of the required medical support in the British Army on the Rhine (BAOR) in case of war. As the regular Army shrinks through successive cuts in defence expenditure, so the TA assumes greater importance. The majority of Medical Assistants (MAs) in TA medical units have no medical training other than that provided during TA service, which in Sponsored Units may be only 19 days per year. Most medical and nursing TA officers have no experience of dealing with battle casualties. With a few exceptions even regular AMS personnel have little experience of dealing with battle casualties. Many medical and nursing tasks cannot be practised on simulated casualties, so must be practised at other times using "dummies". Miller⁴¹ considered that personnel should be taught exactly what to expect in battle, and should be familiarised with the meaning of all the sights and sounds they are likely to encounter.

Peacetime Training: Hardening or "Battleproofing"

"Battleproofing" is a way of exposing men to direct experiences of stress using simulations of actual danger. The rationale is that training under stress improves performance under stress and reduces the likelihood of psychiatric breakdown. Kern and McFann⁴² pointed out that training which contributes to despair may undermine a man's ability to cope in combat. For this reason, carefully graded exposure to stress, based on the principles of systematic desensitisation, is most likely to build confidence and provide a sense of accomplishment. Arduous

military training enhances group cohesion as sharing an ordeal binds people together. Many members of TA units have never seen dead or dismembered bodies. Training must also prepare them for this inevitable horror of war. Against the need for realistic training must be balanced the requirements of TA recruitment and retention. Realistic training would not have any adverse effects on the mature personality. If some members of units are not prepared to tolerate hardship in training, it is questionable whether they would respond satisfactorily in war either.

Education About Stress

All personnel and not only psychiatrists, psychologists and psychiatric nurses should be aware of their role in relation to the prevention and early identification of stress reactions among staff as well as in relation to the care of patients. The principles for the treatment of battleshock, outlined earlier, are also applicable to AMS personnel. Most TA training is concerned with practical skills and physical endurance. However, an elementary understanding of some aspects of psychology could usefully be incorporated into training. It is assumed that the more people know about stress, its causes and its effects, the better they will be able to withstand stress themselves. Such teaching would serve several purposes for AMS personnel:

- It would give them increased insight into their own feelings and behaviour under stress,
- It would enable them to recognise early signs of distress and breakdown in colleagues and subordinates, and
- It would enable them to give more effective treatment to patients suffering from battleshock.

Leadership

The study of leadership is given much emphasis in the training of regular officers and NCOs. Lack of time limits the amount of leadership training carried out in the TA. It should be noted that professional qualifications cannot necessarily be equated with leadership ability.

In the British Army Adair's⁴³ functional approach has long been used. Adair teaches that the effective leader is aware of the task, group and individual needs of his men and has the knowledge, skills and attitudes to meet these needs in accordance with the priorities of the situation. Leadership functions in relation to the three sets of needs include:

- Task needs*: Most leaders are aware of their responsibility in this area, but they must also be seen to be competent. Confidence in the leader is one of the most important factors in reducing combat fear⁴⁴.

- b. *Group needs*: This refers to the leader's functions in holding the group together as a cohesive team, and is now known to be one of the major factors in maintaining morale and preventing psychiatric breakdown.
- c. *Individual needs*: These functions include attending to personal problems, encouraging and training individuals. Maslow's⁴⁵ hierarchy of basic human needs is helpful in considering individual needs.

The leader's personal qualities can influence the morale of his men. Shaffer⁴⁴ found that observation of a calm model was important in reducing fear. To some extent both fear and confidence are contagious, so the leader must set an example by his own behaviour.

Much has been written about authoritarian, democratic and "laissez-faire" styles of leadership and the relative merits of each. The current view is that different leadership styles are successful according to the functions of the group and the conditions in which the group is operating. Fiedler (1967) found that groups working under favourable circumstances do best with democratic leadership. However, in unfavourable circumstances, when the group is subject to stresses and ambiguity eg. armies in war, then a more autocratic style is efficient and actually preferred by group members. However, APRE Exercise Early Call I¹² claimed that with extreme sleep deprivation "a more relaxed style of leadership was appropriate".

Group Cohesion

The importance of a small well-integrated group in the maintenance of morale and the development of courage is now recognised by many military writers. As Hart³⁰ wrote "loyalty to the group goes way back to the very roots of man."

It is now known that the number of psychological casualties is related as much to group characteristics as to individual personality traits. In their 1973 war, the Israelis had fewer cases of battleshock in cohesive units with high "esprit de corps", than in other units. Similarly, it has been found that the more new reinforcements are brought into an established group, the higher the rate of psychiatric breakdown. Abraham²⁴ pointed out that integration into a cohesive group is an indispensable condition to maintain recovery from battleshock.

Hart³⁰ considered that troops should be kept together for long periods during training, so that the bonds necessary in war could be formed in peace. Group cohesion will develop through shared experiences, particularly shared adversity. Good leadership can also create the conditions for cohesion to develop.

A cohesive group provides an excellent system for the early identification and management of stress. Both colleagues and group leaders should be able to recognise when a person is showing signs of strain. It is helpful if close friends can share their feelings and discuss them in an understanding and supportive atmosphere.

Research on conformity has shown that a group has great power as an instrument of control over members. Most people so strongly desire acceptance by the group that they modify their views and behaviour to conform to group norms. If an individual fails to conform on matters important to the group, then he is likely to be rejected.

Group leaders should be aware of outcasts, as such people may be vulnerable to breakdown in battle and a liability to the whole group. Depending on the nature of the group norm, this process of conformity can lead on the one hand to spreading drug abuse or theft or on the other hand can serve as a bulwark against desertion or rebellion.

Information, Control and Participation

Hart³⁰ argued that lack of knowledge about what is happening leads to rumour and uncertainty, which can be damaging to morale. The less information the staff are given, the more rumour will proliferate.

It has been claimed that one of the major stresses contributing to illness is lack of evidence that one's actions are leading to anticipated consequences⁴⁶. A large number of studies have shown that control over aversive events reduces the stress associated with those events⁴⁷. Control, predictability and feelings of competency are related concepts and are all important in reducing the subjective experience of stress.

There is not time in war for decision-making by committee. However, commanders at all levels do well to share their thoughts before giving firm orders, and at times to delegate the decision-making process to other. The object of this is not only to train subordinates and increase their sense of control and participation, but also to serve as a vital safeguard against faulty decision making resulting from fatigue and sleep loss.

Counselling

Various reports⁴⁸ have emphasised the need for counselling services for civilian doctors and nurses, to provide support for those who request it. In an AMS unit confidential counselling would enable personnel to deal with emotional and psychological problems in the context of an understanding relationship. Counselling would fill the gap between informal peer support and formal psychiatric intervention. Its basic purpose is to assist the individual

to see his difficulty more objectively and to make his own rational decision from among the choices available to him. Psychiatric experience is not really essential. The lay capability for counselling is demonstrated by such organisations as the Samaritans and the Marriage Guidance Council. Given adequate training, and possibly psychiatric support, a suitable medical or nursing officer could function as unit counsellor. The person appointed should be a genuine volunteer as strong motivation towards the work is essential.

The Role of Religion

At times of great adversity people look in the direction of religion to find sense in their suffering, to be assured of meaning in their existence⁴⁹. One survey found that a large proportion of soldiers found prayer to be the most helpful means of coping with fear under the most frightening conditions⁴⁴. Organised church services also bring the unit together, creating a feeling of unity through joint worship.

An Army Chaplain⁵⁰ wrote that morale is partly a moral and spiritual condition, and thus of special concern for the Chaplain. In addition to his spiritual role, the Chaplain can increase morale in many ways: he can give encouragement and show appreciation; he can instil optimism and confidence; he can attend to personal welfare problems; he can befriend the isolated; he can set an example by his own exemplary behaviour; and he can increase the lower ranks' sense of worth.

In the rush of casualties it would be tempting for a commander to engage the Chaplain in tasks of more immediately practical value. This would be a mistake, as the Chaplain has such a crucial role in maintaining morale and in assisting those with personal and emotional problems.

Hospital Chaplains in wartime will have an important role in helping AMS personnel as well as patients. A report by the General Synod stated that "In certain types of hospitals the support that a Chaplain can give to staff and their need for such support, is at least as great as the ministry to the patient; we think that the hospital Chaplain must always be ready and willing to support and council all staff who seek his help."

The Chaplain is not necessarily a professional counsellor. Despite his important role in relation to welfare, his presence does not reduce the need for a properly trained unit counsellor. However, it could well be possible to train a Chaplain in such work, thus combining the two roles.

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Order of St John of Jerusalem

The following officers have been appointed Serving Officers of the Most Venerable Order of the Hospital of St John of Jerusalem.

Officer Brother

Brig D L Macphie, MB, ChB, L/RAMC, Col J Restall, MB, BS, FFARCS, L/RAMC, Col C W Bowen, MC, MRCS, LRCP, L/RAMC, Col J W Salkeld, TD, MB, BS, L/RAMC (TA), Lt Col D J L Carson, TD, MB, BCh, BAO, RAMC (TA), Maj D G Price, RAMC.

Associate Officer Brother

Col S Bernstein, MB, BCh, BAO, FRCGP, L/RAMC.

Serving Brother

S/Sgt G E Hawley, RAMC.