



MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

(S)

United States Army
Health Care Studies
and



Clinical Investigation Activity

COMBAT STRESS: LESSONS LEARNED FROM
RECENT OPERATIONAL EXPERIENCES

MAJ James M. King, Ph.D.
A. David Mangelsdorff, Ph.D., M.P.H.
MAJ Donald E. O'Brien, Ph.D.

FINAL REPORT
Report #85-002
Part B

JANUARY 1985

AD-A159 861

DTIC FILE COPY

US ARMY
HEALTH SERVICES COMMAND
FORT SAM HOUSTON, TEXAS 78234

DTIC
ELECTE
S OCT 8 1985 D
A

Approved for Public Release
Distribution Unlimited

85 10 8 094

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER HCSCIA Report #85-002B	2. GOVT ACCESSION NO. AD-A159 861	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) Combat Stress: Lessons Learned from Recent Operational Experiences	5. TYPE OF REPORT & PERIOD COVERED Final Report Sep 83 to Dec 84	
	6. PERFORMING ORG. REPORT NUMBER	
7. AUTHOR(s) MAJ James M. King, Ph.D. A. David Mangelsdorff, Ph.D., M.P.H. MAJ Donald E. O'Brien, Ph.D.	8. CONTRACT OR GRANT NUMBER(s)	
9. PERFORMING ORGANIZATION NAME AND ADDRESS Health Care Studies and Clinical Investigation Activity, Health Services Command Fort Sam Houston, TX 78234-6060	10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS	
11. CONTROLLING OFFICE NAME AND ADDRESS Same as Item 9	12. REPORT DATE January 1985	
	13. NUMBER OF PAGES 28	
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) HQDA (DASG-PSC) WASH DC 20310-2300	15. SECURITY CLASS. (of this report) Unclassified	
	15a. DECLASSIFICATION/DOWNGRADING SCHEDULE	
16. DISTRIBUTION STATEMENT (of this Report) Approved for public release; distribution unlimited.		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18. SUPPLEMENTARY NOTES DA306627		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) stress, psychological; cohesion; morale; operations; lessons learned; Falklands; Grenada; Sinai		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Much has been written about combat stress, and the possible levels of casualties that such stress may produce. One of the most effective ways of reducing combat stress is to maintain a high level of cohesion and morale. Commanders need ways to assess the status of their units in these areas. There have been a variety of programs developed to manage stress; their application to the military setting is discussed. The objectives of this study were: 1) Conduct a literature search to		

NOTICE

The findings in this report are not to be construed as an official Department of the Army position unless so designated by other authorized documents.

Regular users of the services of the Defense Technical Information Center (per DOD Instruction 5200.21) may purchase copies directly from the following:

Defense Technical Information Center (DTIC)
ATTN: DTIC-DDR
Cameron Station
Alexandria, VA 22304-6145

Telephones: AUTOVON (108) 28-47633, 34, or 35
Commercial (202) 27-47633, 34, or 35

All other requests for these reports will be directed to the following:

US Department of Commerce
National Technical Information Services (NTIS)
5285 Port Royal Road
Springfield, VA 22161

Telephone: Commercial (703) 487-4600

determine the relevant reports and articles on stress in light of recent operational experiences. (2) Conduct a workshop to assess those lessons learned. (3) Consult with units engaged in combat training missions. 4) Provide the AMEDD with information which would permit more effective training and organization for the prevention and treatment of operational stress casualties.

A list of references on operational stress was developed. The Fourth Workshop on Combat Stress was conducted to identify the lessons learned. There are a number of important lessons which can be derived from the descriptions of the operational stresses in the recent operational experiences described in detail in this report. Consultations with Forts Carson and Hood revealed that the survey instruments used in these studies have acceptable psychometric properties. Actions appropriate to the pre-development, deployment, and post-deployment phases of operations are described. ✕

Future efforts should focus on: (1) The validation of cohesion measures against objective measures of unit performance. (2) Combat stress training packages which provide for battle stress casualty play have been developed, and need full scale evaluation of their effectiveness and acceptability as training vehicles. An Executive Summary is available as Part A.

Distribution For	
WPS CRA&I	<input checked="" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By	
Distribution /	
Availability Codes	
Dist	Avail and/or Special
A-1	



TABLE OF CONTENTS

DISCLAIMER.....	i
REPORT DOCUMENTATION PAGE.....	ii
TABLE OF CONTENTS.....	iv
INTRODUCTION.....	1
OBJECTIVES.....	5
METHODS.....	5
FINDINGS AND CONCLUSIONS.....	6
DEVELOPMENT OF THE BIBLIOGRAPHY.....	6
LESSONS LEARNED.....	6
CONSULTATIONS.....	11
APPLICATION OF THE LESSONS.....	11
RECOMMENDATIONS.....	17
REFERENCES.....	18
ANNEX A (BIBLIOGRAPHY).....	20
DISTRIBUTION LIST.....	24

Much has been written about combat stress, and the possible levels of casualties that such stress may produce in combat. Commanders need to be reminded of the threat which combat stress represents to the effectiveness of their troops, and of the most efficient ways of avoiding stress casualties and of dealing with the ones that do occur. One of the most effective ways of reducing combat stress is to maintain a high level of cohesion and morale. Thus, commanders also need ways to assess the status of their units in these areas.

There have been a variety of programs developed to help manage stress. At the Psychology in the Department of Defense Symposium (1982), a session on stress management documented the variety of civilian and military efforts in stress management (Swiney, 1982). Stress programs may focus on individual responses, group responses, organizational responses, situational factors, or some combination of these factors. The Army program was developed in response to repeated requests for information on how to develop training programs for the management of combat stress reactions. To date, three workshops have been conducted.

The first Users' Workshop on Combat Stress, conducted in 1981, attempted to address the needs of the mental health care providers in several key Army units, including the 82nd Airborne Division, the 101 Airborne Division (Air Assault), the 2nd Armor Division, and the 1st Cavalry Division. These needs included: (1) presenting authoritative information on current threat estimates, concepts on countering and defeating the threat, and casualty estimates; (2) discussing the projected tasks and

functions of line and health care personnel who will identify, refer, treat, and/or prevent combat stress casualties; and (3) setting goals, establishing methodologies to achieve these goals, and deciding upon means for evaluating goal attainment.

Participants from combat units were asked to bring and to describe whatever training programs, handouts, packets, or written ideas they had for training soldiers, leaders, medical and mental health personnel. The mental health staffs were to be prepared to: identify their unique training needs, commit themselves to developing and conducting their own training programs, evaluating their own programs, and sharing the results of their programs with the other workshop participants.

Task groups were formed and were instructed to define their goals, to decide how to reach them, and to determine how to evaluate their progress towards achieving these goals. Most of the group goals focused on establishing training programs and reorganizing resources to achieve the maximum training effect.

A training program developed for the Community Mental Health Activity at Fort Knox, KY entitled Project COPE (Combat Operations and Psychiatric Effectiveness) was run for the workshop participants. The three task groups were required to role play medical personnel at battalion aid stations. Participants were required to triage psychiatric and medical casualties presented in the form of simulated field medical cards, to provide effective interventions for the simulated stress casualties, to maintain effective radio communications, and to cope with a series of increasingly stressful situations. Evaluators provided feedback to participants as to the

effectiveness of their treatments and dispositions. At the conclusion of the exercise, the participants processed their experiences, insights, and feelings, in order to develop a more effective training program.

Participants were asked to work towards achieving the goals of their task groups. A network of resources had been established. Contributions from the participants were collected, edited, and assembled into a proceedings volume which was sent to each participant (Mangelsdorff and Furukawa, 1981). The collected proceedings were intended to serve as a reference resource, to encourage commitment to dissemination of this information, and as a reminder of the goals and outputs of the workshop. It became clear that additional workshops would be needed to reach other units. Thus, a second workshop on combat stress was organized.

The Second Users' Workshop on Combat Stress, held in 1982, brought together both line officers with command or training responsibilities and mental health officers. Participants were asked to exchange their own training materials. The diversity of participants allowed for modifications in the form and type of presentations. Task groups were formed. Each group was asked to assess the needs of the group members in terms of concerns, problems, or issues related to combat stress. Solutions for these needs were to be developed. Organizational Effectiveness consultants were used to facilitate the task group process. The most common themes were: development and presentation of an effective combat stress training program, determination of the

target audience for such programs, and determining where such programs were needed.

Participants were tasked with returning to their respective units and posts to work on developing effective combat stress training programs. As in the First Users' Workshop, contributions from the participants were assembled into a proceedings volume (Mangelsdorff and Furukawa, 1982). The proceedings were sent to all participants in both workshops. The intent was to remind participants of their commitments and to enlarge the network of individuals working on the problems of combat stress.

The Third Users' Workshop on Combat Stress, held in 1983, was devoted to unit cohesion, a crucial determinant of both individual and unit psychological readiness. Representatives of the 4th Infantry Division, the Walter Reed Army Institute of Research, the Soldier Support Center, the Army Research Institute for the Behavioral and Social Sciences, the 9th Infantry Division, the 82nd Airborne Division, the Academy of Health Sciences, and the Israeli Defense Force met to discuss their ongoing activities with respect to the assessment and development of unit cohesion. The participants were tasked to: define the elements of cohesion, determine what commanders need to know about the cohesiveness of their units, identify the indicators and/or crucial aspects of unit cohesion, determine how best to provide feedback to commanders about the cohesiveness of their units, and to develop suggestions to assist in the development of unit cohesion.

Groups were formed to address these tasks. Facilitators from the Health Care Studies and Clinical Investigation Activity assisted in the group process. The results from the individual groups were presented to all of the participants for further discussion and reflection. The definitions of unit cohesion, and the many instruments available to meet these definitions suggested that unit cohesion is a multi-faceted entity. As in the previous workshops, contributions from participants were assembled into a proceedings (Mangelsdorff, King, and O'Brien, 1983). These proceedings were distributed to all participants for further consideration.

Objectives

The objectives of this study were to:

1. Conduct a literature search to determine the relevant reports and articles on stress casualties in light of recent operational experiences.
2. Conduct a workshop to assess those lessons which can be learned as a result of recent operational experiences.
3. Consult with units engaged in combat training missions.
4. Based on recent operational experiences, provide the AMEDD with information which would permit more effective training and organization of mental health resources for the prevention and treatment of operational stress casualties.

Methods

It was apparent that another workshop would be required to focus on the lessons learned from the recent Israeli, British, and American operational experiences. This effort was preceded by a literature review which entailed collecting papers and

presentations made in a variety of settings. The Fourth Workshop on Combat Stress (Mangelsdorff, King, and O'Brien, 1984), to be discussed below, brought together participants from the Academy of Health Sciences, Health Services Command, the British Royal Navy, the Israeli Defense Forces, the Walter Reed Army Institute of Research, the 82nd Airborne Division, and a variety of other units. The participants considered the lessons related to combat stress to be learned from the Israeli experiences, to include those in Lebanon, from the British operations in the Falklands, and from the American experiences in Grenada, Central America, and at the National Training Center. In addition to the literature review and the workshop, consultations with units at Forts Carson and Hood were undertaken. The intent of these consultations was to assess the issues and concerns affecting cohesion and morale of units deploying from their posts to engage in combat training missions. Feedback was provided to the units in the form of consultation reports.

Findings and Conclusions

1. The bibliography developed as a result of the literature review is contained in Annex A. This list was developed during the Fourth Workshop on Combat Stress.

2. A workshop was conducted to identify the lessons learned from recent operational experiences. This was the Fourth Workshop on Combat Stress. In order to document stress occurring during training, peace keeping, and actual combat, the term operational stress will be used in this discussion. There are a number of important lessons which can be derived from the

descriptions of the operational stresses inherent in the recent operational experiences described in those Proceedings. These lessons are:

A. It is crucial to train both medical and line personnel at all levels to recognize and deal with operational stress before a mobilization. In order to accomplish this goal, realistic operational stress casualty play must be included in field exercises. The tendency has been to forget the lessons learned about operational stress in the intervals between deployments. Operational stress can occur even in normal training deployments. The physical symptoms of operational stress may include tachycardia, palpitations, urinary and fecal retention or incontinence, hot and cold sweats, muscle tremors, nausea, and vomiting. The behavioral symptoms of operational stress may extend from anxiety, exaggerated startle reactions, sleep disturbances, mild despondency, affective flattening and cognitive slowing, and conversion reactions through extremes of aggression, depression, or other functional disorganization. All of these symptoms are more fully described in the Proceedings of the Fourth Workshop on Combat Stress.

B. Mental health personnel must establish liaison with line units before a deployment in order to assist in developing an appreciation of the relevant issues. These liaisons must include training and interacting with the units in order to develop credibility. Ideally, the mental health personnel who deal with a unit should be dedicated to that role and clearly identified ahead of time to all parties concerned.

Bibliography of Recent Stress and Military Casualty Literature

- Abdennur, A. Combat reaction among a sample of fighters in the Lebanese civil war. *Psychiatric Journal of the University of Ottawa* (June 1980), 5(2): 125-128.
- Bar-On, S., Solomon, Z., Noy S., and Nardi, C. War related stress: an overview of the clinical picture in the 1982 conflict in Lebanon. Presented at the Third International Conference on Psychological Stress and Adjustment in Time of War and Peace, Tel Aviv, Israel, January, 1983.
- Baycar, R.S., Aker, F., and Serowski, A. Burn casualties in combat: a need for protective garments. *Military Medicine* (March 1983), 148(3): 281-282.
- Belenky, G.L. SGRD-URI-B. Subject: OCONUS Trip Report - Visit to the Mental Health Department of the Israeli Defence Force June- July 1982. Battle Stress Casualties in the Israeli Defence Force During the War in Lebanon.
- Belenky, G.L., Noy, S., Solomon, Z., and Jones, F.D. Psychiatric Casualties (Battle Shock) in Israeli Defense Forces in the War in Lebanon June - September 1982.
- Belenky, G.L., Tyner, C.F., and Sodetz, F.J. Israeli Battle Shock Casualties: 1973 and 1982. WRAIR NP-83-4. August, 1983.
- Berchin, R.J. Medical unit survival on the modern battlefield. *Military Review* (June 1982), 62 (6): 62-74.
- Brooks, F.R., Xenakis, S.N., Ebner, D.G., and Balson, P.M. Psychological reactions during chemical warfare training. *Military Medicine* (March 1983), 148 (3): 232-235.
- Bull, P.T., Merrill, S.B., Moody, R.A., Baker, D.J., Yates, A, Geraghty, I.F., Tighe, S.Q.M., Squires, S.J., and Stoot, C.J.. Anaesthesia during the Falklands campaign. The experience of the Royal Navy. *Anaesthesia* (1983), 38: 770-775.
- Chermol, B.H. Psychiatric casualties in combat. *Military Review* (July 1983), 63 (7): 26-32.
- Chermol, B.H. The quiet enemy: combat stress. *Army* (September 1983), 33 (9): 18-25.
- Gabriel, R.A. Operation Peace for Galilee: The Israeli-PLO War in Lebanon. (Hill and Wang, 1984)
- Harris, J.J., Segal, D.R. Observations from the Sinai: boredom -- A peace-keeping irritant. Walter Reed Army Institute of Research.
- Hardaway, R.M. Wartime treatment of shock. *Military Medicine* (December 1982), 147 (12): 1011-1017.

Annex A

BIBLIOGRAPHY OF RECENT STRESS AND MILITARY CASUALTY LITERATURE

Swiney, J.F. (Ed.). (1982). Proceedings, Psychology in the Department of Defense, Eighth Annual Symposium. (USAF TR 82-10). Colorado Springs, CO: US Air Force Academy.

REFERENCES

- Jones, D.R. (1981). Medical readiness initiative, moving forward. Paper presented at the 28th Annual USAF Operational Problems in the Behavioral Sciences. Brooks Air Force Base, TX: School of Aerospace Medicine.
- Mangelsdorff, A.D. and Furukawa, T.P. (Eds.). (1981). Proceedings Users' Workshop on Combat Stress. (Consultation Report #82-004). Fort Sam Houston, TX: Academy of Health Sciences.
- Mangelsdorff, A.D. and Furukawa, T.P. (Eds.). (1982). Proceedings Second Users Workshop on Combat Stress. (Consultation Report #83-004). Fort Sam Houston, TX: Academy of Health Sciences.
- Mangelsdorff, A.D., King, J.M., and O'Brien, D.E. (Eds.). (1983). Proceedings Third Workshop on Combat Stress. Cohesion. (Consultation Report #84-001). Fort Sam Houston, TX: Health Care Studies and Clinical Investigation Activity.
- Mangelsdorff, A.D., King, J.M., and O'Brien, D.E. (Eds.). (1984). Proceedings Fourth Workshop on Combat Stress. (Consultation Report #85-002). Fort Sam Houston, TX: Health Care Studies and Clinical Investigation Activity.
- Mangelsdorff, A.D., King, J.M., and O'Brien, D.E. (1985a). Consultation with the 4th Infantry Division (Mechanized), Fort Carson, Colorado: Combat Stress Survey. (Consultation Report #85-004). Fort Sam Houston, TX: Health Care Studies and Clinical Investigation Activity.
- Mangelsdorff, A.D., King, J.M., and O'Brien, D.E. (1985b). Consultation with the First Cavalry Division, Fort Hood, Texas: 1st Cav Survey. (Consultation Report #85-003). Fort Sam Houston, TX: Health Care Studies and Clinical Investigation Activity.
- Mangelsdorff, A.D., King, J.M., and O'Brien, D.E. (1985c). Battle Stress Survey. (HCSCIA Report #85-001). Fort Sam Houston, TX: Health Care Studies and Clinical Investigation Activity.
- Rioch, D.McK. (1968). Prevention: the major task of military psychiatry. Psychotherapy and Psychosomatics, 16, 55-63.
- Stokes, J.W. and Sheehan, T.D. (1984). AMEDD system program review recommendations for division and corps level combat stress control units. In Mangelsdorff, A.D., King, J.M., and O'Brien, D.E. (Eds.) Proceedings Fourth Workshop on Combat Stress. (Consultation Report #85-002). Fort Sam Houston, TX: Health Care Studies and Clinical Investigation Activity.

Recommendations

It is clear that that the lessons learned from recent operational experiences must be vigorously applied. However, further study of these matters must be pursued. Areas in need of additional work at this time include:

A. The validation of cohesion measures against objective measures of unit performance for a wider variety of unit types is needed. Existing cohesion instruments should be administered to selected active and reserve component units both before and after participation in scheduled training exercises. Independent measures of unit performance, to include ARTEP scores, should be obtained. The ability of the instruments to predict the level of unit performance should be assessed through these independent measures. The effects of training experiences on unit cohesion, to include the effects of a poor performance on an exercise, should be determined through pre- and post-training surveys. This validation is essential to the effective employment of cohesion measures in the total Army.

B. Combat stress training packages which provide for battle stress casualty play in field exercises have been developed. These packages have been subjected to informal testing, but there is a need for full scale evaluation of the effectiveness and acceptability of the packages as training vehicles within combat, combat support, and combat service support units.

In order to efficiently utilize the available mental health resources, the debriefing sessions will again be conducted with unit-oriented groups. Many of the troops will need to reconstruct their experiences with the others present. In conducting these sessions it is important to insure that the medical and mental health staff who supported the operation are also debriefed. Media and public reactions will require particular attention in the case of combat operations.

During or upon return to the garrison, it will be important to follow-up all identified operational stress casualties in order to insure that both the service member and the service member's family are receiving appropriate interventions. Family interventions may also be required for some troops who were not identified as operational stress casualties during a deployment. These families might best be identified through a family support network.

At this point, it is also necessary to assess the morale, vertical, and horizontal cohesion of the maneuver and support units involved in the deployment. This should be accomplished through the use of some standardized survey instruments administered during the pre-deployment phase. These results should be incorporated into a vigorous program of command consultation to prepare for subsequent operations.

conventionally wounded casualties will also be operational stress casualties.

Interventions with units will involve group interviews. These will be ventilation sessions which will allow troops to share experiences. They will also permit the informal assessment of unit mental health status and will provide the opportunity to identify non-obvious cases of operational stress. In the course of these interventions, it will be particularly important to closely observe personnel in leadership positions and other crucial individuals for signs of operational stress, and to take appropriate action.

The mental health personnel will also need to provide an ongoing series of consultations to the supported units to assist them in dealing with unique aspects of the operational environment. These consultations will emphasize the importance of sleep, water, and food discipline; they will also assist in dealing with the build-up of feelings of isolation, danger, and fatigue. Recent experiences suggest that commanders may require advice as to the impact of media activities on their troops.

The post-deployment actions of mental health personnel will involve debriefing as many of the deployed and supporting personnel as possible, following up on operational stress casualties, performing assessments of unit status, and preparing for subsequent deployments through a vigorous program of command consultations.

develop faith in their equipment and procedures. The training of these two groups must be integrated to allow the maneuver troops to develop faith in their supporting units. The support troops seem to be a population particularly at risk for operational stress and will need particular attention during this phase.

The final pre-deployment action is to implement an ongoing program of unit mental health, cohesion, and morale assessment as part of a command consultation program. These efforts will provide a basis for decisions on preventive programs.

During the deployment phase of an operation, the mental health personnel will watch for symptoms, conduct individual and group interventions, and provide ongoing command consultations to the supported units. These actions will reflect an emphasis on preventing operational stress casualties and on encouraging a rapid return to duty when operational stress casualties do occur.

The symptoms of operational stress have been adequately listed in other sources (Mangelsdorff and Furukawa, 1981; Mangelsdorff and Furukawa, 1982). The major ones are neurotic and psychotic behavior, and behavior which is maladaptive in a military setting; e.g., disobedience, excessive or inappropriate use of drugs or alcohol, exhaustion, and burnout.

In dealing with individual operational stress casualties, the forward-oriented treatment principles of PIE/IMPRESS, described in Mangelsdorff, King, and O'Brien (1984) must be followed. All efforts must emphasize the expectation of return to duty. In order to efficiently use the available mental health resources, therapeutic interventions will, for the most part, be conducted in groups. It must be emphasized that many

reactions of troops. Both the medical and the line hierarchies must be convinced of the value of post-operational debriefings ahead of time. They must be disabused of the notion that the "They've suffered enough, leave them alone" attitude is in the best interest of the troops. The complete coordination within and between the line, medical treatment, evacuation, administration, and communications chains must be accomplished before an operation begins. As treatment will, of necessity be forward oriented, this will necessitate abandoning the "medical center" model of care for operational stress casualties. The relationship with the line commanders must be established prior to deployment. Mental health personnel will only be successful with the supported units if they have established an atmosphere of trust with these units down at all organizational levels. The supported units must be encouraged to conduct realistic training using the levels of equipment and supplies which would be taken on a deployment, in order to develop their psychological readiness for combat conditions.

Establishing and maintaining appropriate levels of unit morale, vertical, and horizontal cohesion must be done ahead of time. This is clearly a function of the chain of command, but mental health personnel can have an impact through command consultations. Personnel turbulence can make the development of cohesion particularly difficult, as this turbulence seriously impedes unit bonding and the flow of knowledge from the experienced troops to the newer soldiers. Troops in maneuver and support units need to train in a realistic fashion in order to

The pre-deployment actions to control operational stress must emphasize prevention. These actions involve supporting families, establishing a suitable organizational and training baseline, establishing and maintaining appropriate vertical cohesion and morale, and conducting pre-deployment unit status assessments.

Providing preestablished support programs to families or significant others will relieve troops' concern and reduce the initial shock of starting an operation. Appropriate actions would include establishing family support networks, providing realistic and believable evacuation or protection plans where needed, and providing for the unique needs of single troops. This type of support was crucial in Grenada and in the Sinai and would likely be vital in the event of a European mobilization. Support programs will not compromise the security of an operation if they are properly supervised and conducted as routine ongoing activities.

A suitable organization and training baseline is also important. It must be recognized that present and anticipated mental health resources will be very limited, and must be effectively used. Any changes in the organization of the field mental health delivery system must insure that the mental health personnel are thoroughly identified with the supported unit, and that they have established credibility with that unit. Liaison with the chaplains must also be established. Mental health personnel will need to insure that both medical and non-medical personnel receive suitable training in identifying and dealing with all aspects of operational stress, including the grief

operation, and they are now witnessing a number of delayed stress reactions. In both the Grenada and in the Falklands operations, the mental health assets were not deployed with the troops, but were held back. There is reason to believe that this action raised the level of operational stress casualties in these operations.

1. The final, and perhaps most crucial lesson from these experiences is that the level of operational stress can be dramatically reduced if troops know that their families and property at home are being looked after. Such efforts as family outreach or support programs, information efforts, and support groups can be crucial. Single troops also have concerns about family, friends, and property left behind which must also be addressed.

3. The consultations with Forts Carson (Mangelsdorff, King, and O'Brien, 1985a) and Hood (Mangelsdorff, King, and O'Brien, 1985b) revealed that the survey instruments used in these studies have acceptable psychometric properties, although further research on these instruments is needed. Examples of survey instruments are contained in Mangelsdorff, King, and O'Brien (1985c).

4. In order to be of use, however, these lessons must be applied. The remainder of this discussion will describe pre-deployment actions, deployment phase actions, and post-deployment actions which can be taken to control operational stress.

ventilation of feelings, analyses of expectations, discussions of future goals, and evaluations of the individual and collective results of the experience. The shock of participation in a stressful operation may be similar to that seen in more common forms of disaster, and can be expected to produce similar effects.

G. Commanders are in need of specific information and advice if they are to minimize the effects of operational stress within their units. These items of information and advice include: emphasizing the importance of realistic training for the specific mission; stressing the maintenance of sleep, food, and water discipline for all troops and leaders; recognizing that troops are not always busy when leaders are busy, and planning accordingly; and recognizing that troops and leaders require realistic expectations about an operation.

H. The recent operational experiences of the American and British forces have resulted in relatively low levels of apparent operational stress casualties. The British have suggested that the number of operational stress casualties was 5 to 10 percent of the number of conventional casualties. American data from Grenada were not available for this discussion. These operations were, however, conducted using elite units from these military establishments, were popular on the home front, were of a relatively mild intensity, were of short duration, and were very successful. Even under such favorable conditions, the level of stress was much higher than casualty figures would indicate. The British suggest that their number of operational stress casualties was beginning to rise towards the end of the Falklands

prevent the spread of operational stress effects throughout a unit. Efforts which will aid in the control of operational stress include meaningful activities for the troops, information, communications home, rest and food, and realistic training. Factors which tend to mitigate against operational stress include use of elite and highly cohesive units, a short duration conflict, a low level of indirect fire, unopposed landings, thorough preparation, a low level of other casualties, and being on the attack.

E. Unit status assessments before and after an operation are essential. These assessments should include, at a minimum, assessments of unit cohesion and morale. Morale appears to be a common factor relating to the ability of units to withstand operational stress across cultures, although some of the details of the relationships do differ. High levels of cohesion and morale are crucial in all operations. Unit status assessments should also tap goal ambiguity on the part of the troops in the surveyed unit. Other important areas include confidence in self, comrades, leaders, equipment, command climate and leadership, discipline, and motivation. These assessments can, and should, be accomplished in the field.

F. Post-operational debriefings, in the form of group discussions, are especially useful in dealing with operational stress. These debriefings could take place in field settings. This applies to combat, combat support, and combat service support units, to include medical and mental health units at all levels of the evacuation chain. The debriefings should include

C. Interventions should be oriented towards prevention and prompt return to duty. Military mental health professionals have developed a variety of principles for the management of operational stress casualties. Several of the most common sets of these principals are known by the acronyms: PIE, BICEPS, and IMPRESS. PIE (Rioch, 1968) stands for management in Proximity to the unit, Immediate intervention, and the Expectancy of prompt return to the unit. BICEPS (Jones, 1981) maintains that interventions should be characterized by Brevity, Immediacy, Centrality, Expectancy, Proximity, and Simplicity. IMPRESS (Stokes and Sheehan, 1984) suggests that interventions should be Immediate, Proximate to the unit, provide Reassurance, Rest, Replenishment, and Restoration, provide the Expectation of rapid return to duty, be Short, Simple, and Spartan, and be Supervised by professionally qualified personnel. These principles are clearly useful in dealing with operational stress casualties in all settings, but they have not always been employed either in training or in actual operations.

D. Particular attention must be paid to prevention in those populations especially susceptible to operational stress. These groups include support troops and the members of the chain of command. The support troops may be particularly at risk due to their relatively passive role in the face of hostile action. Personnel trained to deal with the specific stressors to be confronted on a mission are less susceptible to operational stress. It will be important to implement programs oriented towards prevention, in order to insure proper treatment for the stress casualties that do occur, and to offer strategies to

Haslam, D.R. Sustained operations with special reference to operational clothing and combat equipment. Early Call 1,2, and 3. Presented to the Thirteenth Commonwealth Defence Conference on Operational Clothing and Combat Equipment, Malaysia, 1981.

Hastings, Max, and Jenkins, Simon. The Battle for the Falklands. W. W. Norton, New York 1983

Ingraham, L.H., and Manning, F.J. Cohesion: who needs it, what is it, and how do we get it to them? Military Review (June 1981): 61(6): 2-12.

Jowitt, M.D., and Knight, R.J. Anaesthesia during the Falklands campaign. The land battles. Anaesthesia (1983), 38: 776-783.

Koranyi, E.K. Psychobiological correlates of battlefield psychiatry. Psychiatric Journal of University of Ottawa (May 1977), 2(1): 3-17.

Levav, I., Grinfeld, H., and Baruch, E. Epidemiological aspects of psychiatric combat reaction. Harefuah (July 1978), 95(2): 53-57.

Llewellyn, C.H. Memorandum for Dean, School of Medicine. Uniformed Services University of the Health Sciences. Subject: Visit with Personnel of the Israeli Defense Force (8 - 17 Jan 1983).

London, P.S. Medical lessons from the Falkland Islands' campaign. The Journal of Bone and Joint Surgery (4 August 1983), 65-B: 507-510.

Michaeli, D. Medicine on the battlefield: a review. Journal of the Royal Society of Medicine (May 1979), 72: 370-373.

Miller, J.A. Combat stress reactions occurring in the Israeli Defense Force During The Lebanon Conflict of 1982. From 101st Airborne Division (AASLT) Ft. Campbell, KY.

Noy, S., Nardi, and Solomon, Z. Battle characteristics and the prevalence of combat psychiatric casualties. Presented at the Third International Conference on Psychological Stress and Adjustment in Time of War and Peace, Tel Aviv, Israel, January, 1983.

Noy, S., Solomon, Z., and Benbenishti, R. The forward treatment of combat reactions: a test case in the 1982 conflict in Lebanon. Presented at the Third International Conference on Psychological Stress and Adjustment in Time of War and Peace, Tel Aviv, Israel, January, 1983.

Noy, S. Battle intensity and length of stay in the battle field as determinants of the type of evacuation. Presented at the Third International Conference on Psychological Stress and Adjustment in Time of War and Peace, Tel Aviv, Israel, January, 1983.

Richards, T. Medical lessons from the Falklands. British Medical Journal (5 March 1983) 286: 790-792.

Rock, Jr., S.K., and Schneider, R.J. Battle stress reactions and the Israeli experience in Lebanon: a brief summary. Medical Bulletin Europe (in press)

Sampson, J.B., Stokes, J.W., Barr, J.G., and Jobe, J.B. Injury and illness during cold weather training. *Military Medicine* (April 1983), 148 (4): 324-330.

Schlatter, E.K.E. Combat exhaustion. *Medical Bulletin U.S. Army Europe* (Feb 1981), 38(2): 15-21.

Schneider, R.J., and Luscomb, R.L. Battle stress reaction and the United States Army. *Military Medicine* (February 1984), 149: 66-69.

Sessions, G.R. Psychological effects of tactical nuclear warfare. Defense Nuclear Agency Intermediate Dose Program Report draft 7 September 1983.

Shaw, J.A. Comments on the individual psychology of combat exhaustion. *Military Medicine* (March 1983), 148 (3): 23-231.

Solomon, Z., and Noy, S. Who is at high risk for combat reaction? Presented at the Third International Conference on Psychological Stress and Adjustment in Time of War and Peace, Tel Aviv, Israel, January, 1983.

Solomon, Z., and Oppenheimer, B. Subsequent military adjustment of soldiers who suffered from combat-reaction in the Yom-Kippur War. Presented at the Third International Conference on Psychological Stress and Adjustment in Time of War and Peace, Tel Aviv, Israel, January, 1983.

Williams, J.G., Riley, T.R.D., and Moody, R.A. Resuscitation experience in the Falkland Island campaign. *British Medical Journal* (5 March 1983), 286: 775-777.

DISTRIBUTION LIST:

**Army Library, ATTN: ANR-AL-RS (Army Studies), Rm 1A518, The
Pentagon, Washington, D.C. 20310 (1)**

**Cdr, Defense Technical Information Center, ATTN: DDA, Cameron
Station, Alexandria, VA 22314 (2)**

**Commandant, Academy of Health Sciences, Bldg. 2840, Fort Sam
Houston, TX 78234 (1)**

**Defense Logistics Studies Information Exchange, USA Logistic
Management Center, ATTN: Mrs. Alter, Fort Lee, VA 23801 (1)**

**Dir, Joint Medical Library, Offices of the Surgeons General,
USA/USAF, RM 1B-473, Washington, D.C. 20310 (1)**

**Headquarters, Department of the Army, ATTN: DASG-HCD-S,
Washington, D.C. 20310 (1)**

**Medical Library, Brooke Army Medical Center, Reid Hall, Bldg.
1001, Fort Sam Houston, TX 78234 (1)**

**Stimson Library, Academy of Health Sciences, Bldg. 2840, Fort Sam
Houston, TX 78234 (1)**

END

FILMED

12-85

DTIC