

Dimensions of Psychological Stress in Peacekeeping Operations

MAJ Paul T. Bartone, MSC USA*
Amy B. Adler, PhD†

MAJ Mark A. Vaitkus, MSC USA*

U.S. military forces are increasingly involved in a variety of multinational peacekeeping and humanitarian assistance missions. How well combat-trained units and soldiers adapt to these new roles will determine U.S. success in such operations, as well as the future health and readiness of the force. In preparing soldiers for such missions, it is critical that leaders and health care providers have a clear understanding of the nature of the stressors they are likely to encounter. This report summarizes findings from a longitudinal, descriptive case study of a U.S. Army medical unit performing a peacekeeping mission in the former Yugoslavia. The goal of the investigation was to identify key sources of stress and to delineate the effect of these stressors on the health, morale, and mental readiness of soldiers. Findings suggest a range of psychological stressors that varies somewhat across operational phases of a peacekeeping mission. Furthermore, the degree of stress experienced in various areas correlates significantly with depression, psychiatric symptoms, and low reported morale. The range of stressors is reduced and summarized in a conceptually derived model of five underlying dimensions of psychological stress salient to soldier adaptation in peacekeeping operations: isolation, ambiguity, powerlessness, boredom, and danger/threat. This model provides a useful heuristic for organizing thinking about stress in peacekeeping operations and leads to several recommendations for "countermeasures" that organizational leaders can take to maintain soldier psychological readiness during peacekeeping operations.

Introduction

After the end of the Cold War and breakup of the Soviet Union, the role of forward-deployed U.S. military forces shifted dramatically from one of defense against possible Soviet aggression to active participation in "out-of-sector" peacekeeping, contingency and humanitarian assistance missions. As U.S. forces in the post-cold era engage in more of these contingency and peacekeeping operations, it is important to develop an understanding of the psychological stressors troops are exposed to on such missions.

Peacekeeping/contingency missions appear to involve some unusual social-psychological challenges and operational stressors for participating soldiers. Although some of the stressors are familiar ones (e.g., family separation), there may be new and unexpected stressors associated with peacekeeping missions. For example, several studies have pointed to extreme helplessness

or powerlessness as a special stressor in peacekeeping operations, and one that may be especially damaging in terms of long-term sequelae.¹⁻³ Some stressors also found in conventional combat operations, such as boredom or isolation,⁴ may have special saliency for peacekeeping soldiers.^{5,6} As peacekeeping operations can differ widely, the nature and characteristics of the particular operation can put very different demands on soldiers. Also, stressors may vary in both quality and intensity across time or phases of a peacekeeping operation. Understanding the psychological stressors of peacekeeping operations is essential to the development of effective programs to enhance soldier adaptation and prevent the ill effects of stress. The successful adaptation of soldiers to psychological stressors in peacekeeping operations is critical not only to individual health and well-being but also for overall mission success.

In October 1992, a first contingent of about 300 U.S. Army personnel deployed from bases in Germany to Croatia to provide medical support for approximately 25,000 United Nations Protection Force (UNPROFOR) soldiers operating in the former Yugoslavia. The mission lasted 6 months and marked the first time in history that U.S. forces donned the "blue hats" and worked under United Nations' operational control. In March 1993, a second U.S. medical unit deployed from Germany to perform this mission. A longitudinal case study of this second task force was conducted, addressing two central questions: (1) what are the stressors encountered over time by soldiers involved in peacekeeping missions? and (2) how do these stressors influence mental and physical health? Descriptive studies such as this serve a vital purpose by providing qualitative data on groups in naturalistic settings, data that are impossible to obtain in a laboratory environment and that can provide suggestive findings and hypotheses for future investigations. Data collection with this unit began in the period before their actual deployment to Croatia and extended over the entire deployment period.⁷

Beyond these empirical issues, an additional theoretical goal was to identify the general psychological dimensions underlying the range of specific stress factors identified. This paper describes the specific stressors found at various phases of the deployment, provides representative findings regarding the effect of peacekeeping stress on health, and presents a conceptual model of the underlying psychological dimensions that appear relevant to soldier adaptation in peacekeeping operations.

Methods

Predeployment data collection was accomplished during an intensive 2-week mission-oriented training period in Wiesbaden, Germany. During this time, 74 semi-structured interviews were conducted with soldiers and 188 surveys were completed. The interviews were done primarily on an individual basis, although a few were conducted in small groups of two or three soldiers. Extensive observations were made of key unit events

*U.S. Military Academy, West Point, NY 10996.

†U.S. Army Medical Research Unit-Europe, Walter Reed Army Institute of Research, Heidelberg, Germany.

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during this period, including predeployment briefings, a unit leader team-building seminar, and the immediate predeployment "lock-down" period and departure ceremony.

During the course of the deployment, a two-person "Human Dimensions Research Team" made four separate data-collection site visits to the unit in Croatia for 7 to 10 days per visit. Since the Persian Gulf War, the Army has made increasing use of such deployable teams of social scientists to identify soldier morale and adjustment issues and to consult with leaders on possible solutions. The first visit (early deployment) covered the initial arrival and transition period. Two mid-deployment visits were made, approximately 2 and 4 months into the deployment. The 4-month data-collection strategy included a questionnaire ($N = 128$, about 60% of soldiers available for duty) and semi-structured interviews ($N = 37$) as well as extensive observations. For our purposes, data from both mid-deployment collection periods (at 2 and 4 months) are collapsed and considered together. The final (late deployment) data collection occurred about 2 weeks before unit redeployment in early October 1993 and included a brief survey ($N = 81$, about 50% of soldiers available for duty) as well as extensive observations and informal interviews.

All surveys and interviews were voluntary and confidential. Using the mid-deployment survey as a reference point, the sample is 78% male, 70% white, and 73% enlisted. Table I provides basic demographic data on the group, using the mid-deployment data.

Despite some variations, all surveys used similar or identical items covering three general areas: (1) sources of stress (a list of potential stressors presented to respondents); (2) physical and mental health outcomes (including morale); and (3) individual and organizational factors that might influence responses to stress, both positive and negative. All surveys included a short (11-item) form of the Center for Epidemiological Studies' De-

pression Scale^{8,9} and a 20-item scale of psychiatric symptoms based on World War II studies.¹⁰ The list of potential stressors was modified in later surveys to include issues that emerged as salient in the soldier interviews.

Results

Although built around an existing core element, the medical task force was specially constituted to perform the UNPROFOR mission. Personnel for the unit, which expanded in size from about 30 to 200 people, were drawn mainly from two locations in Germany, with additional augmentees from geographically dispersed communities. Although it is increasingly common to structure deploying units with personnel and equipment specially tailored for the mission, the situation was extreme for this unit. This provided an unusual natural experiment for gaining insight into the kinds of problems confronted by newly configured units preparing for deployment on contingency and peacekeeping operations. Table II summarizes the principal stress factors identified in the predeployment phase of the operation.

As the newly-formed unit prepared to deploy, there was considerable confusion regarding its composition. Many of the soldiers were complete strangers to each other, and most key leaders were new in their jobs and not yet recognized by the soldiers. Disagreement among senior commanders about how to staff the unit created additional ambiguity that was not resolved until shortly before the actual deployment. This meant that in the predeployment period many unit trainees were unsure about whether they would actually be deploying for the mission. Overall, the major stress factor in the predeployment phase was uncertainty associated with getting to know peers and leaders and finding out who was going and when. Soldiers also expressed substantial concern about how families would cope during the separation, especially those soldiers drawn from outlying areas. This concern was heightened by the loss of services

TABLE I

SAMPLE DEMOGRAPHICS, MEDICAL TASK FORCE

Gender	
Male	82%
Female	18%
Race	
White	69%
Black	16%
Hispanic	8%
Age (mean)	30 years
Rank	
Enlisted	31%
Noncommissioned officers	42%
Officers	27%
Marital status	
Married	55%
Single	27%
Divorced	14%
Separated	4%
Education	
High school	19%
Some college	41%
College degree	25%
Graduate degree	16%

Note: Based on mid-deployment survey (4-months into deployment), $N = 128$

TABLE II

SOLDIER STRESS ISSUES: PREDEPLOYMENT PHASE
(MARCH-APRIL 1993)

- Uncertainty (who is going, when, when return, future of unit)
- Strangers: a newly constituted (specially tailored) unit/task force
- Members drawn from diverse units, backgrounds, home stations
- New unit combines soldiers from TO&E and TDA backgrounds^a
- Leader turbulence; new leaders in key positions
- Predeployment preparation and training seen as redundant, unnecessary
- Time required for unit training and preparation conflicts with family preparation
- Drawdown uncertainty: unit inactivations and base closures possible while deployed

Note: Based on information from surveys ($N = 188$), interviews ($N = 74$), and observations conducted by the authors and Sgt Matthew C. Gilliard II during the 2-week predeployment period.

^a TO&E stands for Table of Organization and Equipment, which represents a unit configured for a wartime mission, and typically with more field experience. TDA stands for Table of Distribution and Allowances, which represents a unit configured for a peacetime mission, and typically with less field experience.

in some communities as a function of the drawdown or reduction of Army forces in Europe. An additional stress issue in the predeployment period relates to time pressure and conflicts between unit preparation activities and time needed for personal and family preparations for the deployment. Many soldiers described feeling frustrated and powerless, such as when soldiers were required to be present at the unit for seemingly minor activities and were thus prevented from attending to important family business and preparations.

After weeks of preparation and anticipation, the actual deployment came as an exciting experience and even a welcome relief for many. Soldiers interviewed in theater shortly after deploying reported feeling physically tired but emotionally charged and eager to perform the mission. Table III lists the key stressors in the very early deployment phase. Similar reactions were identified in a recent study of stress and adaptation among American forces deployed to Bosnia for Operation Joint Endeavor.¹¹

As the second contingent to take up the UNPROFOR medical support mission, the initial challenge for this medical unit was to ensure a smooth transition in management and patient care within the Mobile Army Surgical Hospital. While the inpatient census was small ($N \approx 11$), several of these patients were seriously injured or ill and required acute care. One patient was in the advanced stages of acquired immunodeficiency syndrome, needing extensive specialized medical attention from the staff and placing a strain on the medical supply system (e.g., oxygen).

While giving clinical care activities the top priority, the new contingent also conducted a full inventory of medical supplies and equipment, established staff shifts and duties, and determined procedures for triage, treatment, and evacuation of patients. Many soldiers experienced substantial stress associated with determining work unit and section relationships. Virtually every section was composed of individuals who had not worked together previously. Most leaders were also strangers to the soldiers working under them, a fact that added to stress levels; soldiers were uncertain about their leaders' strengths and weaknesses and how they would respond in various situations.

TABLE III

SOLDIER STRESS ISSUES: EARLY-DEPLOYMENT PHASE (MAY 1993)

- Mission handoff, transition of medical support mission from first contingent
- Lack of unit cohesion in work sections; do not know fellow soldiers in section
- Leaders are strangers, newly assigned to unit
- Difficulty in communicating with home, need to assure family safety
- Establishing living space and adjusting to field conditions
- Unfamiliar surroundings; lack of information about where important resources are
- Unclear command and organizational relationships; e.g., Joint Task Force and Mobile Army Surgical Hospital have overlapping lines of authority and responsibility
- Multinational environment; uncertainty about how to relate to foreign soldiers
- Unclear rules of behavior; unclear about what is permitted in deployed setting (e.g., travel)

Note: Based on information from observations and informal interviews conducted by P.T.B. and M.A.V. during a 7-day period.

Once deployed, soldiers were generally eager to contact their families to confirm and verify that all was well at home and to let their families know that they had arrived safely. Limited telephone access made this contact difficult. Another observed stressor related to establishing living areas and adjusting to the field-like conditions. Sleep and work areas were set up in tents, and latrine facilities were also in tents located slightly apart from the living area. Authority and command relationships were unclear in the initial phase, a fact that also contributed to stress levels for soldiers. For example, both the Mobile Army Surgical Hospital commander and the commander of the Joint Task Force were equal in rank (Colonel), with overlapping areas of responsibility. They had to resolve a number of questions regarding their respective boundaries of command authority.

During the mid-deployment phase, the critical stress issue was the lack of meaningful activities in which to engage. This was frequently described as "boredom," a phenomenon also identified as a problem for U.S. forces in the Sinai Multinational Force and Observers⁴ and for Swedish forces in United Nations operations in southern Lebanon.¹² But the nature of this boredom goes beyond a simple lack of interesting or entertaining things to do. Although the daily medical care requirements were generally rather light, there was still a variety of interesting activities in which to engage. For example, there were regular sports competitions, including volleyball, basketball, and soccer, and there were ample reading materials, a well-equipped exercise tent, movies, and a variety of social events. On weekends, free shuttle-bus service was available to downtown Zagreb for shopping and restaurant dining. There were ample opportunities for entertainment and distraction.

The real problem of boredom appeared as the lack of meaningful, professionally relevant work to do. These deployed soldiers were all highly trained professionals, and whether surgeons, mechanics, or cooks, they experienced increased frustration and a sense of futility as the deployment wore on and essentially nothing happened. The mission devolved to one of maintaining individual and unit readiness to respond to medical emergencies of any scale. On a daily basis there were few patients to treat, and most of the presenting problems that did occur were minor in nature. In interviews, many soldiers expressed concern that their job skills were degrading through inactivity. Several physicians requested permission to travel to the forward sectors in theater to provide isolated units better access to medical care and deliver preventive medical services. These requests were denied because of U.S. security considerations and movement restrictions imposed by several groups, including the United Nations and local national authorities.

The mid-deployment phase was also characterized by a growing sense of isolation. This was associated in part with a perceived lack of responsiveness of rear support elements to requests for supplies and replacement personnel. As requests for parts and resupply items went unfilled, increasingly common complaints were "we are forgotten" and "out of sight, out of mind." This sense of isolation was reinforced by the lack of media attention to the UNPROFOR medical support mission. Failing to see much press coverage of their mission, many unit members were convinced that they were forgotten.

Soldiers also experienced a feeling of frustration and powerlessness in getting things accomplished through multiple layers

TABLE IV
SOLDIER STRESS ISSUES: MID-DEPLOYMENT PHASE
(JUNE-JULY 1993)

- Boredom; lack of meaningful, professionally relevant work
- Perceived lack of support from higher headquarters and rear detachment
- Lack of media recognition for mission being performed
- Growing concern/worry about welfare of families back home
- Sense of unfairness, or "relative deprivation": the perception that other troops, nations, soldiers within the U.S. task force have better supplies, pay (including special United Nations supplemental pay), benefits (including United Nations paid leave), freedom to travel, access to vehicles, and awards, recognition
- Ambiguous chain of command

Note: Based on information from surveys (N = 188), interviews (N = 74), and observations conducted during a 10-day period by the authors.

of military and government bureaucracy. Many perceived an unfair distribution of valuable resources, such as special United Nations pay, awards, supplies, and access to vehicles. This led to a feeling of relative deprivation, that others were (unfairly) better off than oneself, and additional frustration and powerlessness because these unfair situations could not be rectified. For many of the married soldiers, concern for the well-being of families back home remained the dominant issue. Table IV lists the main stress factors identified at the mid-deployment phase.

The key stressors in the late-deployment period mainly concerned uncertainty, ambiguity, and boredom. The future basing of the unit was unknown, leaving many soldiers wondering what their next duty location would be and whether they would have to move their families. There was a continued sense of relative deprivation and ambiguity about the mission itself and its long-term value. A nearby mine explosion led to treatment of a small number of civilian "humanitarian" patients at the hospital,

TABLE V
SOLDIER STRESS ISSUES: LATE-DEPLOYMENT PHASE
(AUGUST 1993)

- Boredom, lack of meaningful work
- Perceived lack of support from higher headquarters ("out of sight, out of mind")
- Problems with resupply, replacement personnel, responding to family crises
- Growing sense of betrayal, e.g., talk of family support not matched with action
- Increased equipment breakdowns; vehicles, generators, and equipment failures; tents wearing out, leaking
- Continued lack of recognition from media and from senior leaders
- Continued ambiguity about the nature of the mission
- Growing doubts about the long-term value of the mission
- Concern, worries about family safety and welfare
- Uncertainty about base closures, unit deactivations, moves
- Continued perception of unfairness: sense of relative deprivation regarding living conditions, comforts and amenities, pay, travel opportunities, access to vehicles, leave, awards, time off

Note: Based on information from surveys (N = 81), informal interviews, and observations by P.T.B. and M.A.V. conducted during a 7-day period.

TABLE VI
MEAN STRESSOR RATINGS OVER TIME (STANDARD DEVIATIONS
APPEAR IN PARENTHESES)

Stressors (from list of stressors on survey) ^a	Deployment Phase		
	Pre ^b	Mid ^c	Late ^d
Getting ready to deploy	2.62 (1.08)	-	-
Changes in unit leadership	1.92 (1.06)	1.87 (1.16)	1.91 (1.13)
Having to move family to U.S.	1.94 (1.31)	1.81 (1.26)	2.20 (1.42)
Army drawdown and cuts	2.63 (1.31)	2.58 (1.47)	2.48 (1.51)
Not knowing where unit will be based	-	3.13 (1.71)	2.31 (1.46)
Missing spouse	-	3.18 (1.50)	3.06 (1.41)
Uncertainty about where family will live	1.63 (1.11)	2.55 (1.70)	2.05 (1.56)
Boredom	-	2.58 (1.43)	2.45 (1.22)
Lack of ready access to transportation	-	2.43 (1.42)	2.47 (1.42)

^a Stress items were presented to survey respondents as a list of potential stressors, rated on a six-point Likert scale in terms of how much trouble or concern is caused by each: 0 = none, 1 = very low, 2 = low, 3 = medium, 4 = high, 5 = very high. Some questions were not included in all versions of the questionnaires. These questions are marked by a dash.

^b N = 188.

^c N = 128.

^d N = 81.

TABLE VII
STRESSORS RATINGS RELATED (PEARSON CORRELATIONS) TO
DEPRESSION, SYMPTOMS, MORALE (MID-DEPLOYMENT PHASE)

Stressors ^a	Outcome Indicator		
	Depression	Symptoms	Morale
Personal health problems	0.30**	0.39***	NS
Boredom	0.25**	0.25**	-0.20*
Rear detachment	0.27**	0.33***	-0.23**
Family safety	0.42***	0.41***	-0.22*
News reports about trouble in the former Yugoslavia	0.26**	0.28**	-0.20*
Unit leadership	0.25**	0.27**	-0.44***
Isolation	0.34***	0.35***	-0.17*
Having to move family back to U.S.	0.41***	0.48***	NS
Marital infidelity	0.37***	0.35***	NS
Marital problems	0.27***	NS	NS
Delays in getting mail	0.44***	0.33***	NS
Trouble making phone calls	0.49***	0.43***	-0.17*
Problems living in Europe	0.41***	0.43***	-0.23*
Problems with co-workers	0.34***	0.29**	-0.39***

^a Rated on a six-point Likert scale in terms of how much trouble or concern is caused by each stressor: 0 = none, 1 = very low, 2 = low, 3 = medium, 4 = high, 5 = very high (N = 128). NS, not significant. ***p < 0.001; **p < 0.01; *p < 0.05.

which the staff generally welcomed as an opportunity to exercise their medical skills. At the same time, this incident generated increased questions about why more medical care was not provided to local civilians in need. During this same period, the security threat increased as regional targets came under artillery attack from Serbian factions. Bosnian Serb factions also announced a list of potential targets that included the UNPROFOR field hospital at Camp Pleso. This clearly escalated tension levels for a time, although paradoxically it also brought positive effects. The increased danger or threat generated a heightened sense of realism regarding the mission as well as greater media attention. It also appeared to bolster unit cohesion, as soldiers labored together to strengthen perimeter defenses in the face of a common external threat. Stressors in the late deployment period are listed in Table V.

Table VI provides mean scores for the most highly rated stress items in each of the three surveys: predeployment, mid deployment, and late deployment. It is clear from these results that family separation, uncertainty, boredom, and inability to change things (or powerlessness) are persistent themes over time on this operation.

What, if any, is the relation between stressful experiences on peacekeeping operations and health outcome indicators? To examine this question, we computed zero-order Pearson correlations between stress reports and two health outcome measures, depression and psychiatric symptoms. Table VII presents these correlations for individual stress items as well as total stress score for the mid-deployment period (a similar pattern of results was found in the predeployment and late-deployment

survey data). Results show that stress exposure is strongly related to depression, psychiatric symptoms, and morale in this sample of soldiers.

In addition to identifying specific stressors in peacekeeping operations, it is important to determine the underlying, more general issues that might summarize the range of stressors observed. Can the specific stressors be classed into more general categories that make sense, providing a better understanding of soldier responses? In pursuit of this goal, we applied a careful conceptual analysis to the data on stressors across the entire operation. The following five dimensions summarize the specific stressor data quite well: isolation, ambiguity, powerlessness, boredom, and danger/threat (Table VIII).¹³

Discussion

By studying a single Army unit during its 6-month peacekeeping deployment to the former Yugoslavia and using interview, observation, and survey methods, we have identified the main stress factors at various phases of the operation. We have also shown that levels of stress can have real consequences for soldiers, with higher stress levels associated with more physical and mental health symptoms and lower morale. This information should be quite useful to leaders and policy-makers who wish to reduce stress levels for soldiers on deployments and better prepare soldiers to resist the ill effects of deployment-related stress.

Considering all available data on stressors during this mission, we present a conceptual working model of the underlying psychological issues that appear salient for soldiers involved in

TABLE VIII
DIMENSIONS OF PSYCHOLOGICAL STRESS AND COUNTERMEASURES IN PEACEKEEPING OPERATIONS

STRESSORS		COUNTERMEASURES
• Isolation	Physically remote locations Obstacles to communication Newly configured units Individuals cross-attached Family concerns	Give accurate, practical information on what to expect Provide briefings by those who have been there Encourage use of e-mail, phone, fax Conduct team-building exercises Family support; new communication methods (e-mail)
• Ambiguity	Mission not clear Command structure confusion Role/identity ambiguity	Give clear definition of mission Hold frequent troop meetings, "commander calls" to provide information and answer questions Clarify chain of command, lines of authority
• Powerlessness	Rules-of-engagement restrictions Constraints on movement, action Foreign culture and language Relative deprivation: "double standards" Exposure to suffering	Leaders explain and justify rules of engagement Provide education and self-development options Information briefs, classes on host culture, language Leaders ensure fair access to goods and services, explain discrepancies honestly Public works projects
• Boredom	Repetitive, monotonous routines Lack of meaningful work Over-reliance on "busy work"	Use creative training programs Soldier-exchange programs with other forces Self-development and education programs Public works projects
• Threat/danger	Threat to life or limb; Mines, snipers, disease Exposure to death	Provide sound training, equipment, policies Keep soldiers informed about physical threat Provide regular debriefings

peacekeeping operations. Like any model, this one serves to organize the data and also leads to hypotheses for further testing. In several as yet unpublished studies by the U.S. Army Medical Research Unit-Europe, this model has shown good applicability with respect to other deployments and types of missions, including a border-patrol mission in the former Yugoslav republic of Macedonia, a Patriot missile unit rotation in Saudi Arabia, and the U.S. Implementation Forces in Bosnia (Operation Joint Endeavor).

Understanding the nature of stress on peacekeeping operations is important because individual soldier health as well as mission success depends heavily on how effectively soldiers adapt to these mission stressors. By focusing attention on the general stress issues encountered during peacekeeping operations, the model presented here also facilitates thinking about countermeasures, or ways to reduce stress (Table VIII). For example, the sense of isolation common in peacekeeping operations might be countered with improved methods of communication and sharing of information, within the unit as well as with rear elements and families. Newsletters, media reports, telephone and electronic communications, and frequent command briefings are all useful counters to isolation during peacekeeping operations. Likewise, cohesion-building activities take on added importance when units must function for extended periods in remote locations. French researchers have attributed the low levels of psychiatric problems among French forces in the former Yugoslavia to the effectiveness of cohesion-building activities in the predeployment phase.¹⁴

The dimension of boredom on peacekeeping missions warrants particular attention. Boredom on such missions may come as a function of simply not having enough to do or a lack of variety in the types of activities available.^{5,12} But the experience of this medical task force suggests that the most distressing and potentially damaging form of boredom comes from insufficient professionally meaningful work and activities. Thus, recreation and entertainment activities may be helpful, but they are not enough to solve the problem of boredom. Rather, activities that provide professional or personal growth and development are needed. Maddi and Kobasa¹⁵ have suggested that when stressful circumstances are not amenable to control or change, an effective coping strategy involves "compensatory self-improvement." This means pursuing some activity that is constructive and provides an opportunity for personal development and growth. For soldiers confined in circumstances in which there is a shortage of challenging professional work, such as some peacekeeping deployments, this might be learning a new language, learning to play a musical instrument, studying local culture and history, pursuing a hobby, correspondence courses, writing, or developing one's fitness or skill at some sport. At a group level, community projects and soldier-exchange programs with other national forces can be highly effective. Such activities offer the added benefit of enhancing teamwork and small-unit cohesion.

It is characteristic of modern peacekeeping operations that the situational features and demands differ somewhat across missions. Although the experience of the U.S. medical task force described here may be in some ways unique, the major stressors identified have been observed to a greater or lesser degree in other operations.³ The dimensions of boredom and isolation are

familiar ones; they have been important issues in the U.S. Sinai deployment and are also significant in the experience of Swedish and Norwegian forces in Lebanon.^{2,16} The powerlessness or helplessness dimension has also been noted as a significant stressor in several operations, including those in Lebanon and Somalia. A recent study of Canadian forces in the former Yugoslavia reported that the leading stressors were double standards or unfair application of the rules and powerlessness to change the situation.¹⁷

Several investigators have noted role ambiguity as a key stressor for combat-trained soldiers engaged in peacekeeping operations.^{6,18} The present study also calls attention to another source of ambiguity, that associated with an unclear command structure in multinational operations such as UNPROFOR. Ambiguity and uncertainty regarding rules of engagement and the purpose of the mission are commonly seen. The French experience in the former Yugoslavia identifies these as important stressors, as well as confusion about the chain of command under United Nations operations and enforced passivity or powerlessness to act to make things better.^{14,19} Similar concerns have been found among Swedish troops deployed to Bosnia.²⁰

The risk of injury and death (threat/danger dimension), as well as exposure of peacekeeping troops to death and violence, clearly varies across different operations. In recent U.S. experience, the Somalia operation presented the greatest physical dangers to troops on a daily basis. But even apparently safe and peaceful operations always carry some danger, if only from possible terrorist strikes. U.S. operations in Lebanon were peaceful until a terrorist truck bomb killed 240 Marines in 1983. More recently, the terrorist bombing of U.S. military housing in Saudi Arabia (Khobar Towers, Dhahran), which killed 19 American Air Force personnel and injured hundreds, provides another reminder of the constant threat of terrorism faced by deployed peacekeeping and contingency forces. It is possible that the very unpredictability of such threats on peacekeeping operations, and the sharp contrast they present to regular and generally safe daily routines when they do occur, increase the risk for post-traumatic stress disorder or dissociative disorders.

Understanding the nature of stress encountered on peacekeeping operations is a critical first step toward optimizing soldier health and performance during such missions. Clearly, the nature of the mission and deployment will also influence the relative importance of the five dimensions described here. Additional research is needed to determine how well this model applies across a variety of peacekeeping and other kinds of military operations, and the practical value of suggested countermeasures for reducing psychological stress.

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