TITLE: US Soldier Peacekeeping Experiences and Wellbeing After Returning from Deployment to Kosovo

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ABSTRACT: Peacekeeping experiences present both the opportunity for finding meaning in one's job and the risk for being traumatized. In a study of US soldiers stationed in Germany returning from deployment to Kosovo, soldier experiences with peacekeeping were assessed along with soldier wellbeing. Soldiers (N=1,215) were surveyed using a 15-item peacekeeping experiences scale, the 17-item Post-Traumatic Stress Checklist, a 10-item revised Conflict-Tactics Scale, and three wellness behaviors (alcohol consumption, sick days, and sleep). Findings indicated that soldiers reporting high levels of exposure to peacekeeping experiences reported more post-traumatic symptoms, greater use of conflict-related tactics, more alcohol consumption, more sick days, and less sleep at post-deployment than soldiers with less exposure. Experience with positive aspects of the deployment, such as contact with grateful civilians and engaging in community improvement projects, was associated with greater intention to remain in the military and greater acceptance of the mission's goals. As expected, rank and unit type were key demographic variables in understanding the relationship between experience and wellbeing. The findings suggest the need to target specific units and soldiers for prevention programs.

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13. ABSTRACT *(Maximum 200 words)*

Peacekeeping experiences present both the opportunity for finding meaning in one's job and the risk of being traumatized. In a study of US soldiers stationed in Germany returning from deployment to Kosovo, soldiers experiences with peacekeeping were assessed along with soldier well-being. Soldiers (N= 1,215) were surveyed using a 15-item peacekeeping experiences scale, the 17-item Post-Traumatic Stress Checklist, a 10-item revised Conflict-Tactic Scale, and three wellness behaviors (alcohol consumption, sick days and sleep). Findings indicated that soldiers reporting high levels of exposure to peacekeeping experiences reported more post-traumatic symptoms, greater use of conflict-related tactics, more alcohol consumption, more sick days, and less sleep at post-deployment than soldiers with less exposure. Experiences with positive aspects of the deployment, such as contact with grateful civilians and engaging in community improvements projects, was associated with greater intention to remain in the military and greater acceptance of the mission's goals. As expected, rank and unit type were key demographic variables in understanding the relationship between experiences and well-being. The findings suggest the need to target specific units and soldiers for prevention programs.

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US Soldier Peacekeeping Experiences and Wellbeing After Returning from Deployment to Kosovo

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Often, post-traumatic stress disorder has been the focus of studies examining the impact of military deployments on soldiers' psychological health (e.g., Wolfe, Erickson, Sharkansky, King, & King, 1999; Flach & Zijlmans, 1997; Litz, King, King, Orsillo, & Friedman, 1997; Lundin & Otto, 1996). Although some studies have addressed other symptom areas (e.g., Johansson, 1997), the link between deployment experience and outcome has primarily focused on post-traumatic stress symtpomatology. The studies that have addressed other symptom categories are inconsistent. Some studies have demonstrated that deployment does not have a significant impact on health outcomes (e.g., Vogelaar, Soeters, & Born, 1997), while others have found that there is indeed an impact (e.g., Deahl, Svirnivasan, Jones, Thomas, Neblett, & Jolly, 2000).

The deployment experience presents soldiers with several different types of stressors (e.g., Ritzer, Campbell, & Valentine, 1999; Bartone, Adler, & Vaitkus, 1998; Vogelaar, et al., 1997). Among the many stressors soldiers may encounter, including separation from family, quality of life reductions, and work relationships, it is the exposure to events encountered during the course of executing the mission (e.g., while on patrol) that are particularly critical for understanding the impact of deployment on peacekeepers. These duties represent not only a potential threat to the psychological wellbeing of peacekeepers, but to their physical wellbeing as well.

In order to better understand the relationship between peacekeeping experiences and soldier adjustment, the present study seeks to identify the kinds of peacekeeping experiences soldiers report on such a deployment and the link between these experiences and various outcome measures. It was expected that elevated exposure to peacekeeping experiences would be associated with higher rates of physical symptoms, greater alcohol use, and less sleep at post deployment.

Method

Procedure

U.S. soldiers from the 1st Infantry Division were surveyed one-to-two months following a six-month deployment to Kosovo in support of NATO's Kosovo Force. Surveys were administered to 1,215 soldiers at their home station, located throughout Germany. Surveys were administered in several company-sized groups. Surveys took about 45 minutes to complete, and participation was voluntary.

In all, 93.3% were male, and 6.7% were female. The sample included 56.5% junior-enlisted soldiers (E1-E4), 35.0% non-commissioned officers (E5-E9), and 7.2% officers. Most of the soldiers were married (53.7%) or single (37.2%); 9.0% were divorced or separated. In terms of unit type, 63.0% were from combat arms units, 28.9% were from combat support, and 7.3% were from combat service support units. Ethnic backgrounds included white (56.7%), African-American/Black (23.7%), Hispanic (10.5%), and other (9.1%).

Survey

Demographics. Several survey items addressed demographic questions, including gender, rank, ethnicity, unit type, and marital status.

Peacekeeping Experiences Scale. The Peacekeeping Experiences Scale (PES) consisted of 20 items describing events that peacekeepers may experience. The events ranged from having to exercise restraint while patrolling to being shot at. Response options for each of the experiences were "no, did not experience it" and "yes, experienced it", with "no impact" "a little impact" "moderate impact" and "extreme

impact." The peacekeeping scale was adapted from one used by the US Army Medical Research Unit-Europe during a longitudinal assessment of troops deployed to Bosnia.

Physical Symptoms Scale. The Physical Symptoms Scale (PSS), used in several studies conducted by the Walter Reed Army Institute of Research (e.g., Bliese, Escolas, Christ, Castro, 1998; Halverson, Bliese, Moore, & Castro, 1995) consisted of 22 common physical symptoms (e.g., headaches, intestinal upset, back problems) rated on a 4-point scale (not at all, a little, often, and very often). The PSS sum score was composed of the number of items endorsed as having occurred often or very often.

Wellness Behaviors. Two wellness behaviors addressed the amount of alcoholic drinks consumed in the previous week and the number of hours slept on average per night the previous week.

Results

Peacekeeping Experiences Scale

The dichotomous (i.e. no/yes) responses to the PES were subjected to a 3-factor analysis following a visual examination of the scree plot. A principal component extraction with an oblimin rotation resulted in three factors that explained 58.6% of the variance. The factors were a 5-item factor "body handling and physical devastation," a 6-item factor "threats to self," and a 10-item factor, "peacekeeping patrol." The item loadings on each factor are presented in Table 1.

There were demographic differences in the way soldiers experienced the various factors. Men reported more exposure on all three factors than women, and soldiers in combat arms reported more exposure on all three factors than soldiers from other units. NCOs reported more exposure to body handling and threats to self than did the other rank groups.

Besides the three factors, the PES was analyzed by creating a group of high-scoring soldiers (defined as experiencing 10 or more of the PES items) and a low-scoring group (defined as experiencing fewer than 10 items). About half the group of soldiers were in each group (52.0% and 48.0%, respectively).

PES and Health

Soldiers who scored high on the PES reported significantly more physical symptoms on the PSS sum scale at post-deployment than those who scored low on the PES (2.4 vs. 1.5, $t(1192)=4.71$, $p<.001$). More soldiers who scored high on the PES also reported getting minimal hours of sleep at post-deployment (defined as 5 hours of sleep or less) than soldiers who scored low on the PES (49.2% vs. 34.2%, χ^2 [1, N=1,165] = 26.68, $p<.001$). These patterns were consistent for both Combat Arms and non-Combat Arms units. Also, combat arms enlisted soldiers who scored high on the PES reported greater use of alcohol at post-deployment than combat arms enlisted soldiers who scored low on the PES (7.7 drinks in the previous week vs. 4.9, respectively), $t(542) = 2.69$, $p<.01$.

Discussion

High numbers of peacekeeping experiences during the Kosovo deployment were associated with decreased physical wellbeing 1 to 2 months following the return of soldiers to home station. These experiences, even when measured in a relatively simple manner, demonstrated a consistent association between greater exposure to experiences encountered on a peacekeeping deployment and decreased wellbeing.

In this study, wellbeing was conceptualized as encompassing physical symptomatology. Both alcohol drinking and minimal sleeping have previously been associated with reduced cognitive reasoning and thus suggest that exposure to peacekeeping experiences is important in understanding not only the health of the soldiers but also military readiness in general.

We recognize that the data analyses reported here are incomplete. For instance, the link between the three subscales of the PES and the psychological and physical health outcomes were not examined. Also, a more detailed analysis of the important demographic variables such as gender, military rank, and unit type should be conducted. These analyses are in progress. One may argue that the findings may not apply to all peacekeeping operations. Further, these findings may not even be relevant for other types of military operations such as humanitarian or combat missions. This limitation, while potentially important, is inherent in all studies of this type.

Furthermore, results suggest that soldiers and units reporting relatively high rates of peacekeeping experiences could be targeted for specific prevention efforts. For example, units with high rates of peacekeeping experiences could receive additional anger control or alcohol awareness courses. The results from the study suggest several points for intervention as well as future research and analyses. These follow-up studies will be a key component to developing a refined understanding of the impact of peacekeeping deployment on soldiers. Such an understanding has the potential not only to help soldiers returning from deployments but also to enhance soldier and unit readiness for future operations.

References

Bartone, P.T., Adler, A.B. & Vaitkus, M.A. (1998). Dimensions of psychological stress in peacekeeping operations. Military Medicine, 163, 587-593.

Bliese, P.D., Escolas, S.M., Christ, R.E & Castro, C.A. (1998). Human dimensions assessment of the Task Force XXI Advanced Warfighter experiment. Alexandria, VA: Defense Technical Information Center (DTIC: ADA349889).

Deahl, M., Srinivasan, M., Jones, N., Thomas, J., Neblett, C., & Jolly, A. (2000). Preventing psychological trauma in soldiers: The role of operational stress training and psychological debriefing. British Journal of Medical Psychology, 73, 77-85.

Flach, A. & Zijlmans, A. (1997). Psychological consequences of being taken hostage during peace operations. In Netherlands Annual Review of Military Studies, pp 141-151, Breda, The Netherlands, Royal Netherlands Military Academy.

Halverson, R.R., Bliese, P. D., Moore, R. E. and Castro, C. A. (1995). Psychological well-being and physical health symptoms of soldiers deployed for Operation Uphold Democracy: A summary of the human dimensions research in Haiti. Alexandria, VA: Defense Technical Information Center Report (DTIC: ADA 298125).

Johansson, E. (1997). Four Swedish UN battalions in Bosnia. Karlstad, Sweden, National Defence College.

Litz, B.T., King, L.A., King, D.W., Orsillo, S.M., & Friedman, M.J. (1997). Warriors as peacekeepers: Features of the Somalia experience and PTSD. Journal of Consulting and Clinical Psychology, 65, 1001-1010.

Lundin, T. & Otto, U. (1996). Swedish soldiers in peacekeeping operations: Stress reactions following missions in Congo, Lebanon, Cyprus, and Bosnia. NCP Clinical Quarterly, 6, 9-15.

Ritzer, D. R., Campbell, S.J., & Valentine, J.N. (1999, Jan/Feb/Mar). Human dimensions research during Operation "Joint Guard," Bosnia. Army Medical Department Journal, 5-16.

Vogelaar, A., Soeters, J.L. & Born J.B.G. (1997). Working and living in Bosnia: Experiences of Dutch IFOR Soldiers. In Netherlands Annual Review of Military Studies, pp 113-131, Breda, The Netherlands, Royal Netherlands Military Academy.

Wolfe, J., Erickson, D.J., Sharkansky, E.J., King, D.W., & King, L.A. (1999). Course and predictors of posttraumatic stress disorder among Gulf War veterans: A prospective analysis. Journal of Consulting and Clinical Psychology, 67, 520-528.

Table 1

Peacekeeping Experiences Scale Item Loadings on Three Factors

	Factors		
Scale Item	1	2	3
Being in an accident	.57		
Being attacked/ambushed	.74		
Being taken hostage	.77		
Seeing dead or seriously injured Americans	.58		
Having to aid in the removal of unexploded land mines	.62		
Being shot at*	.56		
Seeing the physical devastation		.63	
Seeing dead bodies or body parts		.84	
Handling or uncovering dead bodies or body parts		.76	
Smelling the stench of decomposing bodies		.79	
Witnessing an accident which resulted in serious injury or death		.67	
Witnessing hostility between the former warring factions		.72	
Patrolling areas (or riding in areas) where there were land mines			.66
Having hostile reactions from civilians you were trying to help			.80
Disarming civilians			.80
Having contact with traumatized civilians			.82
Witnessing hostility over property or boundary disputes			.84
Having to exercise restraint while patrolling			.85
Seeing children who were victims of war			.65
Needing to police or manage civilians in chaotic or unpredictable conditions			.85
Being shot at*			.58

*Item loaded on both factors.

Note: Factor 1 was "Body Handling and Physical Devastation," Factor 2 was "Threat to Self," and Factor 3 was "Peacekeeping Patrol."

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U.S. Army Medical Research and Materiel Command

Aspects of Peacekeeping (some examples)

- **Separation from Home**

  missing family, communication, cultural isolation

- **Quality of Life**

  personal discomfort, general living conditions, lack of privacy

- **The Workplace Environment**

  pace of operations, boredom

  cohesion, leadership, communication

- **The Peacekeeping Role**

  commitment, identity, attitudes toward mission, relevance

- **Peacekeeping Experiences**

  patrols, physical danger, body handling, witnessing hostility

Peacekeeping Experiences: Soldier Reports

Some Recent Examples:

•Johansson (1997) – Swedish peacekeepers in Bosnia (UN)

Common threats: crowds, being prevented from fulfilling their mission, witnessing shelling of villages

- Flach & Zijlmans (1997) – Dutch peacekeepers in Bosnia (UN)

Experiencing being held hostage as traumatic predicts PTSD and sleep problems

- Vogelaar et al (1997) – Dutch peacekeepers in Bosnia (NATO)

Crossing mine areas, being involved in negotiations or confrontations at checkpoints;

Exposure to these threats were not predictive of wellbeing

- Litz et al (1997) – US peacekeepers in Somalia

Traditional combat events (being fired upon, witnessing death, being endangered) were predictive of PTSD

- Fossum & Moldjord (2000) – Norwegian peacekeepers in Kosovo

Threat (e.g., helicopter being shot at), risk (e.g., driving in the dark), isolation, insecurity

Peacekeeping Experiences: US Soldiers in Kosovo

Review of the Literature

1. There are many ways to organize the dimensions of peacekeeping stressors.
2. Peacekeeping duties place soldiers at risk for stress reactions.
3. The emphasis has been PTSD.

General Goals of the Present Study

1. Assess the kinds of peacekeeping duties soldiers perform
2. Assess the kinds of peacekeeping experiences soldiers report
3. Link these peacekeeping experiences to health and behavior

Hypothesis

Peacekeeping experiences, what soldiers see and do, affect their overall health and their subsequent behavior

Background

- This longitudinal research assessment was initiated at the request of the Commanding General of US Forces in Europe.
- The study assessed 1st Infantry Division soldiers at pre-, mid- and post-deployment to Kosovo.
- Surveys were administered to US soldiers stationed in Germany 1-2 months after their return from a 6-month deployment to Kosovo.

Study	Date	N
Kosovo Pre-Deployment (Soldier Study I)	MAR-APR 99	2,094
Kosovo Mid-Deployment (Soldier Study II)	OCT 99	1,718
Kosovo Post-Deployment (Soldier Study III)	FEB 00	1,215

Units Assessed

- Soldiers from the following 1st ID units were included in the assessment:

1-26 Infantry
1-77 Armor
1-7 Field Artillery
2-1 Aviation
9 Engineers
101 Military Intellligence
121 Signal
2BDE Headquarters
299 FSB Forward Support Battalion

Units included combat arms, combat support and combat service support.

UNIT TYPES

Combat Arms (n=597)	63.0%
Combat Support (n=274)	28.9%
Combat Service Support (n=69)	7.3%
Division/HQ (n=8)	.8%

Demographics

Average number of months deployed in Kosovo: 5.4 months

LOCATION

Bondsteel	47.7%
Monteith	24.2%
Other site in Kosovo	26.6%
Other	1.5%

	Post-Deployment N=1,215
Rank	
Jr Enlisted	56.5%
NCO	35.0%
Officer	7.2%
Gender	
Male	93.3%
Female	6.7%
Unit Type	
CA	63.0%
CS/CSS/DIV	37.0%

Families with Children
Living at Home: 43.3%

MARITAL STATUS

Single	37.2%
Married	53.7%
Sep/Div	9.0%

Peacekeeping Experiences Scale

Being in an accident	.57		
Being attacked/ambushed	.74	}	**Threats to Self**
Being taken hostage	.77		
Seeing dead or seriously injured Americans	.58		
Having to aid in the removal of unexploded land mines	.62		
Being shot at*	.56		
Seeing the physical devastation	.63	}	**Body Handling**
Seeing dead bodies or body parts	.84		
Handling or uncovering dead bodies or body parts	.76		
Smelling the stench of decomposing bodies	.79		
Witnessing an accident which resulted in serious injury or death	.67		
Witnessing hostility between the former warring factions	.72		
Patrolling areas (or riding in areas) where there were land mines	.66		
Having hostile reactions from civilians you were trying to help	.80		
Disarming civilians	.80	}	**Peace-Keeping Patrol**
Having contact with traumatized civilians	.82		
Witnessing hostility over property or boundary disputes	.84		
Having to exercise restraint while patrolling	.85		
Seeing children who were victims of war	.65		
Needing to police or manage civilians in chaotic or unpredictable conditions	.85		
Being shot at*	.58		

*split factor

Peacekeeping Exposure Categories: Factors

BODY HANDLING & PHYSICAL DEVASTATION

- 6 Items
- 81.1 % reported at least one experience

PEACEKEEPING PATROL

- 10 Items
- 88.7% reported at least one experience

THREATS TO SELF

- 5 Items
- 57.8 % reported at least one experience

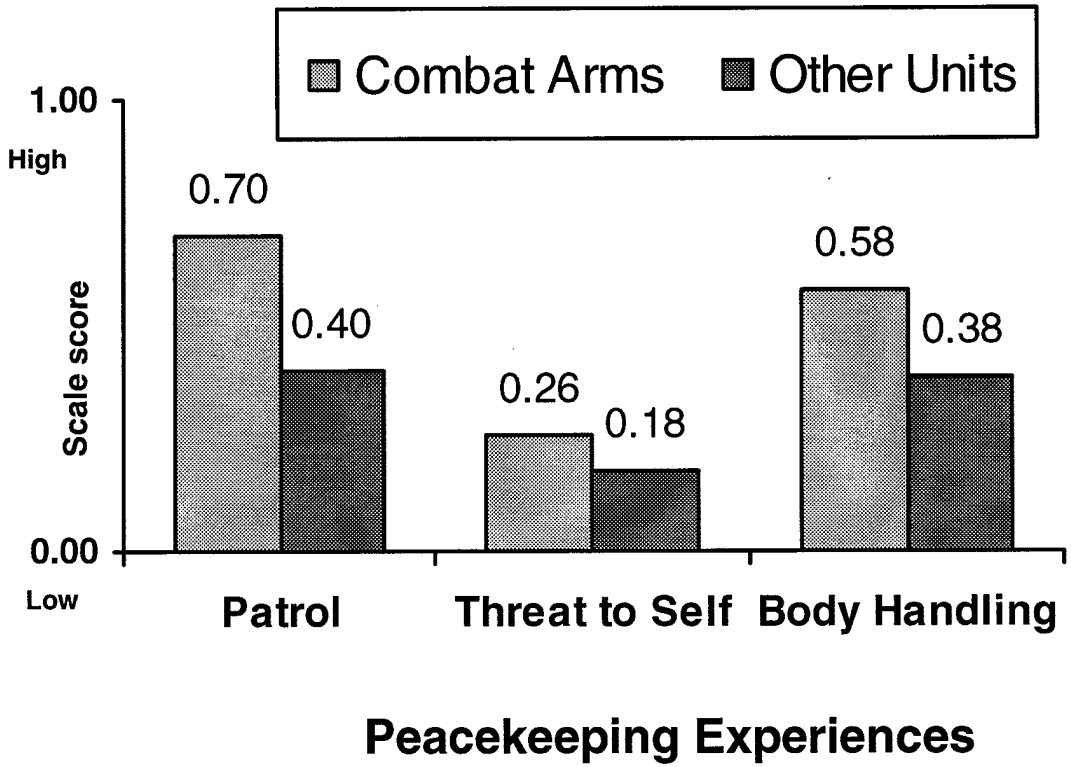
- From a scale of 20 peacekeeping experiences that soldiers encountered while deployed, three basic types of peacekeeping exposure categories were identified:*

- The impact of each experience was also rated by soldiers.

*Based on Factor Analysis, Principal Component Extraction with Oblimin Rotation, Variance explained = 58.6%

Peacekeeping Exposure Categories (1 of 3)

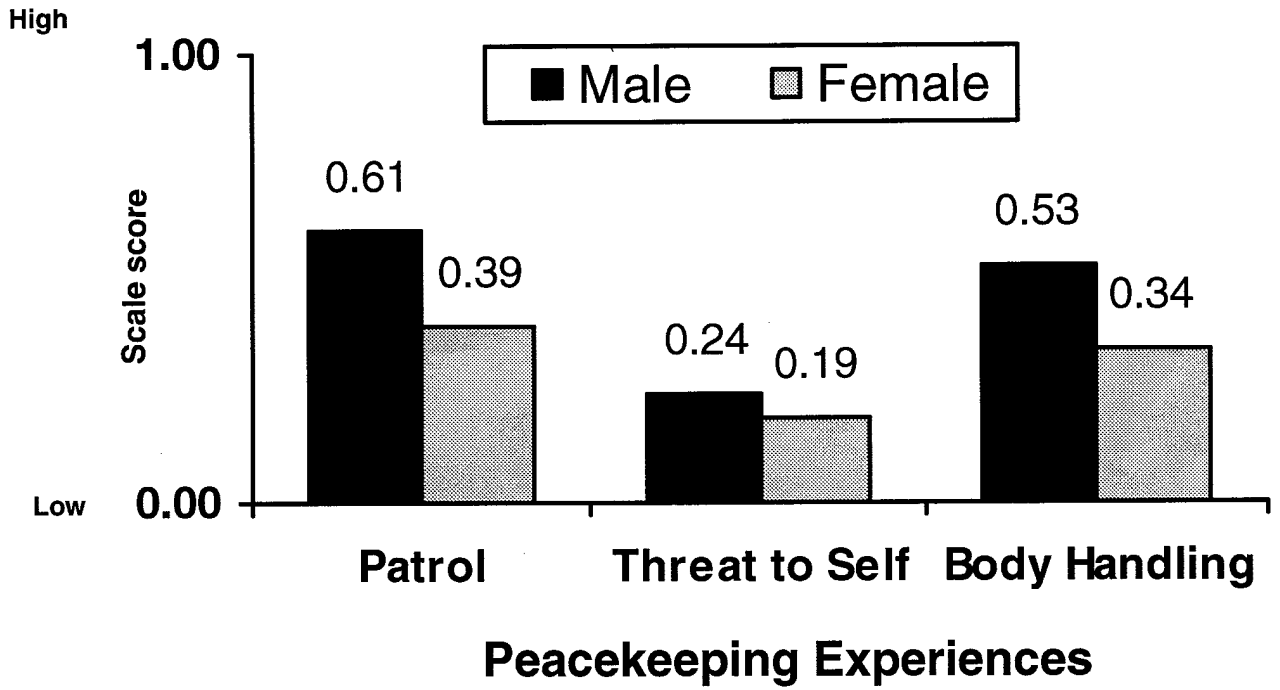
- Soldiers in Combat Arms Units were exposed to more peacekeeping experiences than soldiers from other unit types.*



*p<.05

Peacekeeping Exposure Categories (2 of 3)

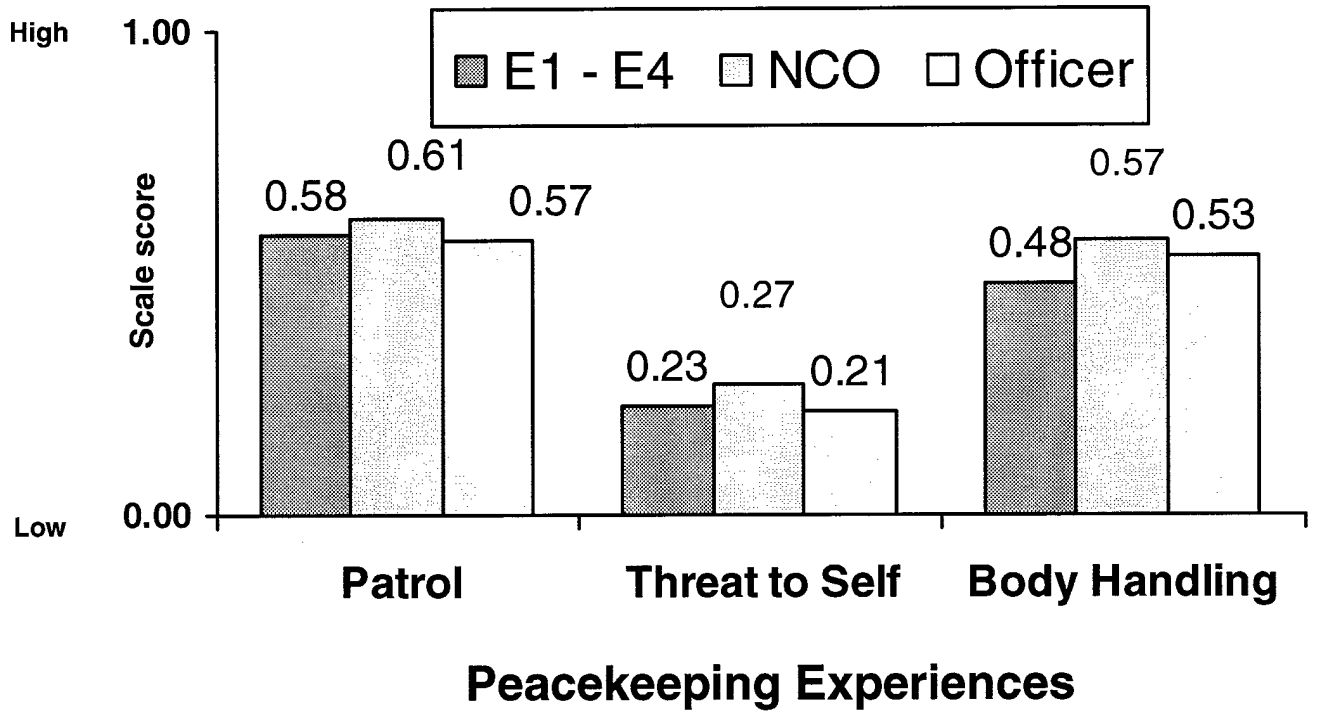
- Male soldiers were exposed to a greater number of peacekeeping experiences in each of the 3 factors than female soldiers.*



*p<.05

Peacekeeping Exposure Categories (3 of 3)

- NCOs reported exposure to a greater number of Body Handling and Threat to Self experiences than did E1-E4 and officers.*

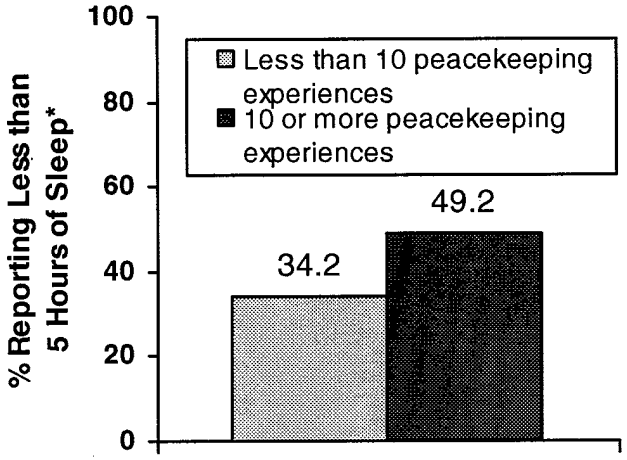


*p<.05

Health: Wellness Behaviors (1 of 2)

- 52.0% of soldiers were exposed to a high number of peacekeeping experiences (defined as 10 or more events), and 48.0% of soldiers were exposed to a low number of peacekeeping experiences (defined as less than 10 experiences).

- Soldiers who were exposed to 10 or more peacekeeping experiences reported more physical symptoms (2.4 vs. 1.5, $t(1192)=4.71$, $p<.001$) and had fewer hours of sleep ($\chi 2(1, N=1165)=26.68$, $p<.001$) than those exposed to less than 10 experiences.



*p<.02.

Health: Conflict-Based Tactics (1 of 2)

Scale Description

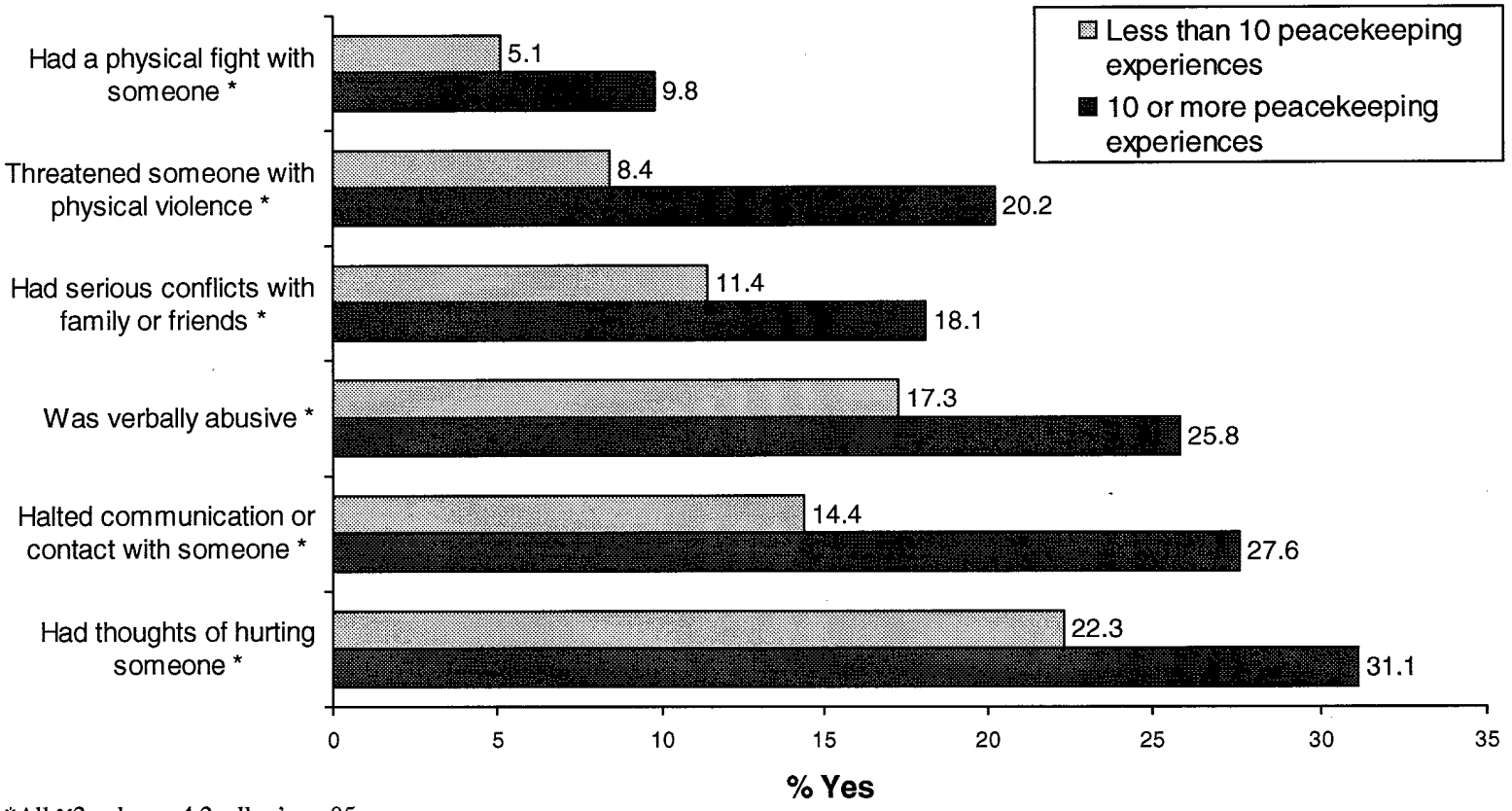
- Health outcomes included a list of 9 tactics people use in responding to conflict.
- The conflict-based tactics ranged from verbal conflict, to thoughts and threats of harming others, to physically fighting with someone.
- Response options were Yes, No, Not Sure, or Can't Say.

General Findings

- In all, verbal and cognitive tactics were reported more often than were physically violent tactics.
- There were no significant gender differences on the use of conflict tactics.

Health: Conflict-Based Tactics (2 of 2)

- Combat Arms soldiers who reported exposure to 10 or more peacekeeping experiences also reported greater use of conflict-based tactics after returning from deployment.

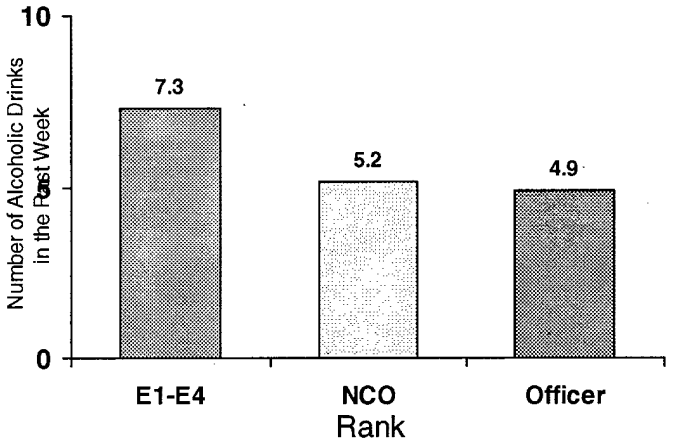


*All $\chi 2$ values >4.2, all p's < .05.

Health: Alcohol Use (1 of 2)

DRINKING BEHAVIOR

NO alcohol consumption in the past week	39.5%
Drinking consistent with alcohol problems (CAGE scores)	12.8%
Since returning to Germany, drove after drinking or rode with a driver who had too much to drink	4.7%

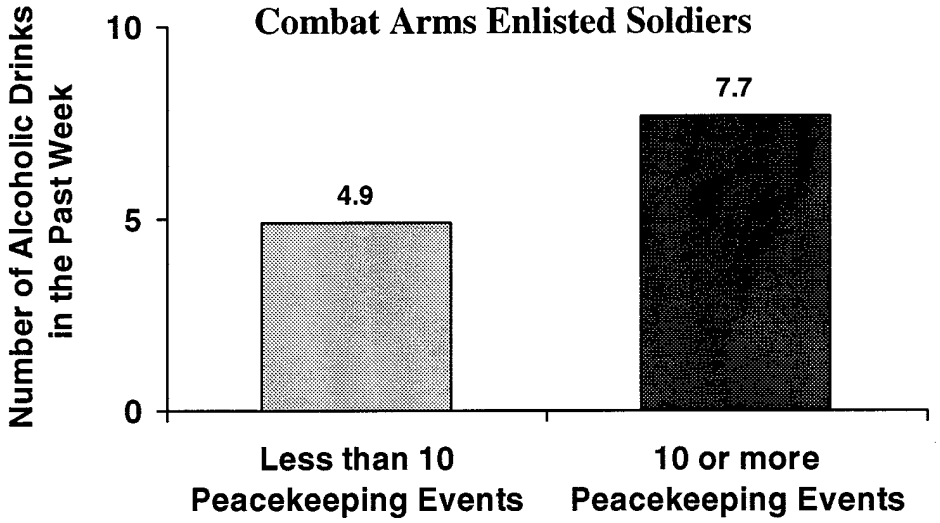


- At post-deployment, NCOs and officers reported drinking less alcohol than did junior-enlisted soldiers

$F(2, 1171) = 4.98, p<.01$.

Health: Alcohol Use (2 of 2)

- Among enlisted soldiers in Combat Arms, the more alcohol they reported drinking, the more conflict-based tactics they also reported using $r=.18, p<.001$.
- Enlisted soldiers in Combat Arms who reported high exposure to peacekeeping experiences also reported greater alcohol use than those with low exposure $t(542)=2.69, p<.01$.



Health: Stress Reactions (1 of 2)

- Impact was considered high if any peacekeeping event was rated as having moderate or extreme impact.

- High impact events were reported by 54.3% of those indicating that they experienced the event.

DEBRIEFERS

Chaplains	43.0%
Unit Leaders	21.0%
Mental Health Professionals	19.2%

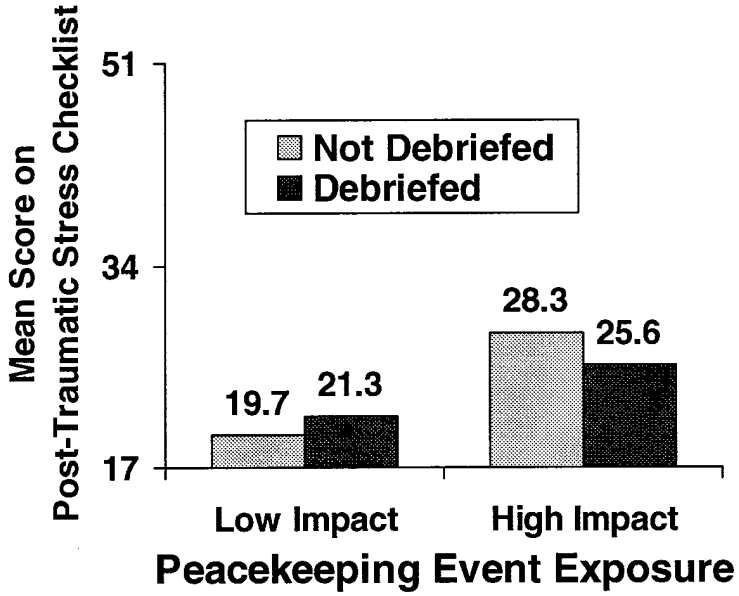
- Soldiers exposed to high impact peacekeeping experiences[1] were more likely to score high on the Post-Traumatic Stress Checklist (PCL) than soldiers who reported only low impact peacekeeping experiences (11.7% vs. 3.3%) $\chi 2$ (1, N=1,115)=26.82, p<.001.

DEBRIEFING PROFILE

- 56.3% reported being debriefed ("guided through a discussion of your deployment experiences").
- Higher-ranking personnel were less likely to have been debriefed than junior-ranking soldiers $\chi 2$ (2, N=1,155)= 42.03, p<.001.
- There were no gender or unit type differences in who received debriefing.

Health: Stress Reactions (2 of 2)

- Debriefed soldiers who were exposed to high impact peacekeeping experiences reported lower PCL scores than non-debriefed soldiers [t(497.08)=2.36, p<.05], but debriefed soldiers with no high impact experiences had higher scores than non-debriefed soldiers [t(454.63)=2.28,p<.05].



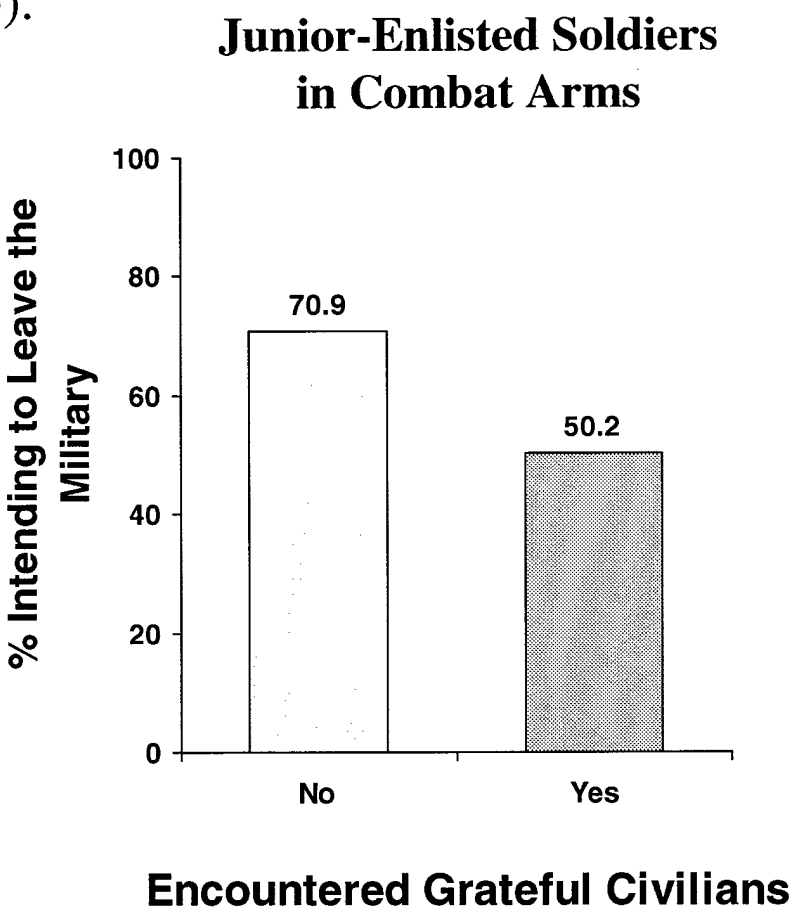
[1]Impact was considered high if any peacekeeping event was rated as having moderate or extreme impact.
High impact events were reported by 54.3% of those indicating that they experienced the event.

Positive Contact with Civilians (1 of 2)

- Most soldiers reported encountering grateful civilians (80.3%) and participating in community improvement projects (60.1%).

Encountering Grateful Civilians

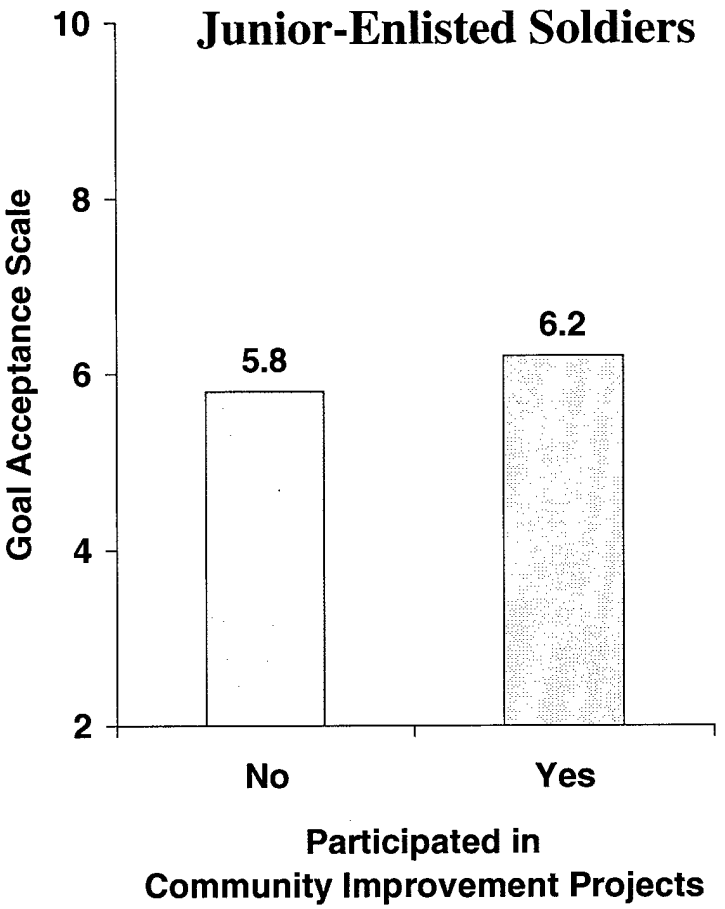
- Combat Arms soldiers who encountered grateful civilians reported being more involved in their job and greater job satisfaction than those who did not encounter grateful civilians $t(588)=3.84$ and 2.14 p's<.001.
- Fewer junior-enlisted soldiers in Combat Arms who encountered grateful civilians intended to leave the military than those who did not encounter grateful civilians $\chi 2\ (2, N=336) = 9.21, p<.05$.



Positive Contact with Civilians (1 of 2)

Community Improvement Projects

- Junior-enlisted soldiers who participated in Community Improvement (CI) Projects reported higher goal acceptance than those who did not $t(675)= 2.98, p<.01$.
- Junior-enlisted soldiers in Combat Arms units who participated in CI Projects also report greater job involvement, goal acceptance and job satisfaction than those who did not $t's(339)>2.39, p's<0.02$.



Summary of Findings

- There were three categories of Peacekeeping Experiences during the Kosovo deployment: Body Handling and Physical Devastation, Peacekeeping Patrol, and Threats to Self.

- Soldiers who reported encountering more Kosovo Peacekeeping Experiences reported more physical symptoms, scored higher on the post-traumatic stress scale, and used conflict-based tactics more often than soldiers who encountered fewer experiences.

- Enlisted soldiers in Combat Arms with a high level of exposure to Kosovo Peacekeeping Experiences reported more alcohol use than those with a low level of exposure.

- Debriefing was associated with increased well-being for soldiers reporting stressful peacekeeping experiences.

- Positive interaction with Kosovo civilians and participation in community projects in Kosovo were associated with higher job satisfaction and increased desire to remain in the military.

Issues to Consider

- When soldiers see the benefits of peacekeeping, they have positive attitudes toward work and greater commitment to the military.

RECOMMEND: Continue and increase opportunities for positive peacekeeping experiences.

- The more negative peacekeeping experiences soldiers encountered, the more they reported post-traumatic stress symptoms, drinking alcohol and using conflict-based tactics.

RECOMMEND: Target high-risk units for various prevention programs, including anger management and alcohol awareness.

- Debriefing appears to improve soldier mental health.

RECOMMEND: Continue and ensure debriefing occurs for soldiers. Follow-up with soldiers who reported high impact peacekeeping experiences and who did not receive debriefing.

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