Stress Reactions Among Swedish Peacekeeping Soldiers Serving in Bosnia: A Longitudinal Study

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Assessments of mental health (GHQ-28) were performed on a Swedish battalion serving in Bosnia at 4 times: before deployment, immediately after deployment, 6 months after deployment, and 1 year after deployment. Complete responses were obtained from 316 participants (61% response rate). No significant change of mental health over time was noted. Individuals having experienced traumatic events in Bosnia, as well as stressful life events postdeployment, reported the poorest mental health. Logistic regression analysis showed that postdeployment stressors made the strongest contribution to registering a poor mental health score after one year.

KEY WORDS: longitudinal study; mental health; peacekeeping; stress reactions.

There are an increasing number of studies on personnel serving in peacekeeping operations, describing the stressors that the individuals have experienced and the sequel they will have to deal with. The mental health state among personnel following these missions often seems to vary as a function of the intensity of the conflict in which they are serving. In a study on U.S. soldiers serving in Somalia, 8% met the diagnostic criteria for posttraumatic stress disorder (PTSD; Litz, Orsillo, Friedman, Elich, & Batres, 1997). In another study, one-third of 3,461 active duty U.S. military personnel who also served in Somalia met criteria for psychiastic caseness (Orsillo, Roemer, Litz, Ehlich, & Friedman, 1998). A high level of PTSD (16%) was found in a study on British soldiers serving in the early stages of the conflict in former Yugoslavia (Baggaley, Piper, Cumming, & Murphy, 1999). A confounder in that study was that most of the soldiers had previously served in Northern Ireland. In a follow-up study of former Norwegian peacekeepers, 5% suffered from PTSD more than 6 years after service (Mehlum & Weisaeth, 2002). In low-intensity conflicts, PTSD may not be the main problem. Instead peacekeepers find themselves exposed to cumulative stress, resulting from boring missions and the ambiguity often present in peacekeeping operations (Carlström, Lundin, & Otto, 1990; Elklit, 1998; Huffman et al., 1999; Lundin & Otto, 1992; MacDonald et al., 1998). In spite of that, there is a lack of longitudinal studies investigating changeover time, focusing on general mental health rather than on PTSD. A longitudinal approach could be of importance in Sweden and other countries where the soldiers are volunteers and go back to their civilian lives after deployment. This situation makes it harder to conduct continuous follow-ups.

The first aim of this work was to study the mental health situation among peacekeeping soldiers by using a longitudinal approach. The second aim was to identify stressors encountered before, during, and after deployment that would be related to the mental health state among the participants. The mission was carried out after the Dayton agreement and believed to be a low-intensity conflict. Therefore, drawing on the results from the studies cited above, the hypotheses were as follows: (1) there will be a low degree of mental health problems after deployment, and (2) mental health problems, at a 1 year
follow-up, will rather be caused by other stressors than those encountered during mission abroad.

Method

Participants and Procedure

Between 1993 and 1999, Sweden deployed 13 mechanized battalions in Bosnia. This study is based on data collected from one of them (the sixth battalion), which was deployed from March until October 1996 within the framework of a NATO-PfP-IFOR mission. Serving in the battalion were 724 individuals. Except for the commander, all personnel were volunteers. Eleven percent were regular army officers, and the majority of the rest was civilian former conscripts. Most of the women in the battalion were nonconscript civilians who had attended a 3-week military combatant course. Of those taking part in this study, 180 (35%) had served in prior peacekeeping missions, some in more than one. Unfortunately we had no access to records of prior traumatic experiences in that group.

All personnel were asked to respond to a questionnaire before deployment, immediately after returning, 6 months after returning, and after 1 year. Of the 724 individuals in the unit, 514 took part in the study (71%). At the 6-month follow-up 395 (77%) of the participants (55% of entire unit) responded, and at 1-year follow-up 365 (71%) of the participants (50% of entire unit) responded. Complete responses on the GHQ-28 (see below) on all four-assessment occasions were obtained from 316 individuals (61%). All forthcoming analyses are based on this complete subsample only.

The mean age of the respondents at the predeployment assessment was 27.6 years (SD = 6.4), ranging from 20 to 53 years. The vast majority (96%) of the participants were men.

Measures

The predeployment questionnaire included sociodemographic data and the following three questions about predeployment stressors (scored as yes/no): Have you had long-term problems in your marriage/cohabitation or family? (family problems), Have you ever thought of taking your own life? (suicide thoughts) and, Have you ever tried to kill yourself? (suicide attempt). These were the same variables that were used in the UNIFIL-study by Weisaeth, Aarhaugh, Mehlum, and Larsen (1993).

The General Health Questionnaire (GHQ-28; Goldberg & Hillier, 1979) was used to assess general mental health on each assessment occasion. The GHQ-28 consists of 28 items. Each item has a 5-point response scale ranging from 0 (most favorable) to 3 (least favorable). Cronbach’s alpha ranged from .81 to .92 on the four assessments.

Following the suggestions of the test constructors (Goldberg & Hillier, 1979), an alternative scoring method was also used where replies were coded 0-0-1-1. Scores could thereby range from 0 to 28. When this method is used, a total score of 5 across all 28 items indicates that there is a 50% probability that the respondent is a psychiatric case (McDowell & Newell, 1987, p. 40) or has a score equivalent to the average patient referred to a psychiatrist (Bowing, 1995, p. 77).

Participants were asked the following question from a checklist (Larsson, Michel, & Lundin, 2000) at the postdeployment assessment, eliciting six behavioral responses regarding the occurrence of traumatic events during their service in Bosnia: “Have you during your service been involved in a particular event according to the list below which you experienced as very stressful (circle Yes or No)?” The list contained the following six types of events: Any kind of firing very close; threats with weapons directed at you; taken prisoner or hostage; seen wounded, maimed, or dead people; been involved in a serious accident (what . . .); and other situation (what . . .). A composite service trauma exposure score was computed by counting all individuals who had scored yes on at least one of the above-mentioned six items.

Follow-up assessments were conducted by sending participants questionnaires by mail 6 months and 1 year after returning from duty. No reminders were sent.

At the 1-year follow-up, the questionnaire included the following nine questions about potential postdeployment stressors (scored as yes/no): Since arriving home from the mission in Bosnia I have had relations problems, had economic problems, experienced a breaking up with girlfriend/boyfriend, experienced a divorce/broken cohabitation, had own serious illness, experienced illness of a close relative, experienced the death of a close relative, experienced a serious traffic accident, and had other problems. A composite postdeployment index, stressful life events postdeployment, was computed by counting all individuals who had scored yes on at least one of the above-mentioned nine items.

Results

Mental Health at the Four Assessment Occasions

The difference between the means on the GHQ-28 across the four assessment occasions, shown in Table 1, was not statistically significant, $F(3, 945) = 1.85, ns$. Similarly, there was no statistically significant difference in