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13. ABSTRACT *(Maximum 200 words)*
Psychological screening for U.S. military began as part of the Joint Medical Surveillance Program conducted from 1996 to 1999 for personnel prior to their re-deployment from Bosnia. The program's primary goals were to provide proactive mental health outreach, project patient load, and develop a clinical profile for those requiring referral. The objective of the present study was to examine personal and clinical history variables that identify those individuals whose scores on the clinical screening indicate psychological risk. The sample consisted of 1,785 U.S. soldiers who were screened one to three months prior to their 6-month peacekeeping deployment to Kosovo. The psychological screening survey included a section on demographics, scales measuring depression, post-traumatic stress symptoms, and alcohol problems, and a series of clinical and problem history questions. Findings indicated that clinical and problem history variables predicted psychological referral status. Psychological screening, when supplemented by clinical and personal history questions can significantly enhance health surveillance initiatives.

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Predicting Referral Status: Clinical Profiles in Military Psychological Screening

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One way to maximize the medical readiness of military personnel is through medical surveillance, the systematic collection of data for "characterizing and countering medical threats to a population's health, well-being, and performance (Brundage, 1998, p. 276)." Psychological screening is one component of medical surveillance. Recent screening research in the military has looked at peacekeeping deployments and how such deployments may pose a medical threat to soldiers and units (Dobson & Marshall, 1997; Orsillo, Roemer, Litz, Ehlich, & Friedman, 1998).

Many countries have established screening programs spanning a wide range of international peacekeeping missions (e.g., the Dutch in Cambodia, 1992 and 1993, the New Zealand Defence Force in Cambodia in 1992, and the Australian Defence Force in East Timor in 1999). Overall, health surveillance has proven valuable for military personnel and is recommended as part of multi-phased operational and medical planning for prevention and risk assessment (Brundage, 1998; Hawley, 1998).

Despite the value of deployment screening, the importance of screening soldiers at pre-deployment, as opposed to post-deployment, is often overlooked or not conducted because of the time and resource constraints involved in deployment preparation (e.g., Orsillo, et al., 1998). Key exceptions to this have found that the pre-deployment time frame can be a significant stressor for peacekeepers (e.g., MacDonald, Chamberlain, Long, Pereira-Laird, & Mirfin, 1998). Along with pre-deployment status, another key set of variables often overlooked in screening is pre-existing problems. In one of the few screening studies to specifically report on the role of pre-existing conditions, the Australian Defence Force found that those with the most serious psychological problems following deployment were those who had previously experienced a

service-related or personal trauma (Johnston, 2000). Indeed, the importance of trauma history has been shown in previous research to be predictive of higher symptom levels in military personnel exposed to subsequent stressors (Martin, Rosen, Durand, Knudson, & Stretch, 2000).

Psychological screening for the U.S. military began as part of the Joint Medical Surveillance Program conducted from 1996 to 1999 for personnel prior to their re-deployment from a peacekeeping deployment to Bosnia. In addition to the program's primary goals of providing proactive mental health outreach and projecting patient load (see Castro, Adler & Huffman, 1999 for a review), another aim of the screening program was to develop a clinical profile for those service members in need of mental health follow-up. The objective of the present study was to examine personal and clinical history variables that identify those individuals whose scores on the clinical screening indicate psychological risk. Psychological risk could include soldiers referred to mental health assets for follow-up, as well as soldiers for whom a problem was detected but the problem was not severe enough to warrant referral. This latter group is designated the sub-clinical group.

Method

Participants

The sample consisted of 1,785 U.S. soldiers stationed in Germany who were screened one to three months prior to their 6-month peacekeeping deployment to Kosovo. The soldiers were primarily junior-enlisted (58.0%) and non-commissioned officers (32.1%), with only 9.9% officers. There were 93.0% men and 7.0% women.

Procedure

Military personnel completed a psychological screening survey. If scores on one of the scales exceeded established criteria, a mental health staff member conducted a brief on-site interview to determine the soldier's referral need. The brief interview, regarded as a form of

psychological triage, resulted in one of four possibilities. The soldier's problems were considered: (1) false positive, (2) mild and not necessarily in need of a referral for follow-up assessment (sub-clinical), (3) moderate and in need of a referral, or (4) severe and in need of immediate follow-up.

Instruments

The psychological screening survey included a section on soldier demographics (e.g. rank and gender) and three scales measuring: depression (SDS; Zung, 1965), post-traumatic stress symptoms (Bartone, Vaitkus, & Adler, 1994), and alcohol problems (Ewing, 1984). In addition, soldiers were asked to complete a series of clinical and problem history questions.

Results

Table 1 provides frequencies for the clinical and problem history variables. We divided the outcome groups into three categories in order to identify the role of background variables: did not exceed primary criteria and were not referred (76.0%, n = 1357); exceeded primary screen criteria and were not referred (19.6%, n = 350); and exceeded primary screen criteria and were referred (4.4%, n = 78).

Our findings indicated that soldiers who did not exceed primary screen criteria were the least likely to endorse each of the four clinical history questions. However, soldiers who exceeded criteria on the primary screen and were referred were more likely to have previously received counseling, have an interest in counseling, be currently in counseling, and have a history of medication when compared with the sub-clinical group of soldiers who exceeded criteria but were not referred. See Figure 1 for an overview of clinical history and referral outcome variables.

We also compared referral status by problem history (see Figure 2). Findings indicated that soldiers who did not exceed primary screen criteria were the least likely to endorse each of the four problem history questions. However, soldiers who exceeded criteria on the primary screen and were referred only differed from the sub-clinical group in their responses to financial and legal problems. The referred and sub-clinical groups were similar in having relatives with alcohol problems or suicidal history, and in having marital problems.

Conclusion

Findings from an assessment of soldiers screened at pre-deployment indicated that clinical and problem history variables predicted psychological referral status. The most predictive background variable was having a relative with alcohol problems, which accounted for more than half of the soldiers who were either referred or in the sub-clinical group. Psychological screening, when supplemented by clinical and personal history questions administered at pre-deployment, can significantly enhance health surveillance initiatives.

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Table 1
Clinical and Personal History Questions (% and n for positive responses)
N = 1,785

Questions	%	n
Do you have relatives with alcohol problems?	33.5	602
Have you received mental or alcohol counseling in the past?	14.3	257
Do you have relatives who have attempted or committed suicide?	14.0	252
Are you having marital or relationship problems?	10.9	196
Are you having financial or legal problems?	9.6	172
Have you ever had a drinking problem?	6.2	112
In the past month, did you drive after drinking or ride with a driver who had too much to drink?	5.9	106
Would you like to speak to a counselor when you return to home station?	3.7	67
Have you ever been on any medications for emotional symptoms or insomnia?	3.6	64
Are you currently receiving mental health or alcohol counseling?	1.3	24

Figure 1
Clinical History and Referral Outcomes

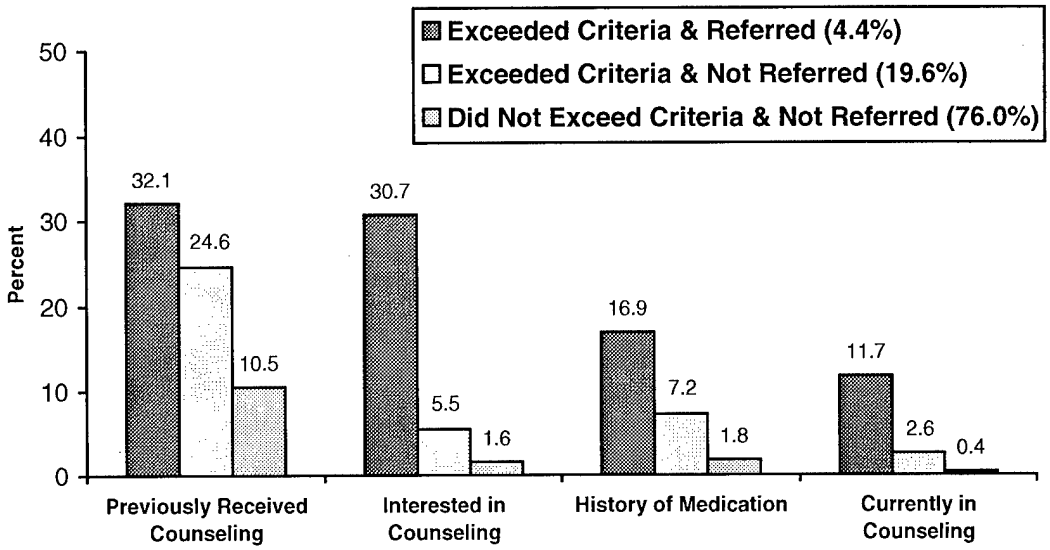

Figure 2
Problem History and Referral Outcomes