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13. ABSTRACT (Maximum 200 words)
Few would argue that the psychological monitoring of soldiers who deploy (e.g., to Saudi Arabia, Kosovo, Uzbekistan) is a responsible health prevention/promotion policy for the military medical community. Stressors are inherent in deployed environments and, in terms of deployment stress, researchers in the military community have demonstrated that these stressors are consistently related to many adverse health outcomes (e.g., Orsillo, Roemer, Litz, Ehlich, & Friedman, 1998). Thus, screening soldiers prior to, during, and after deployments is critical for identifying at-risk soldiers across all phases of deployment operations. Psychological screening is important in terms of ensuring quality mental health care both for the soldier and for the overall mission that could be adversely affected. There remain a few fundamental questions, however, about how to screen soldiers effectively. What is the best set of clinical screening instruments? How important are contextual variables in determining the best screening instruments? Is there a need to develop screening cut-off scores solely for a military population? How does one determine the efficacy of screening for the military? In this paper, we present a brief history of the US Army'spsychological screening program for soldiers deploying to the Balkans. We follow this with a presentation of the current screening instruments used for deployed soldier mental health and propose modifications to the current screening instruments based on sensitivity analyses and contextual concerns. Finally, we test these modifications and present results and implications. In 1996, the Office of the Secretary of Defense, Health Affairs mandated psychological screening for all military personnel redeploying from Bosnia. Three screening scales commonly used in clinical research were selected: the Zung Self-rating Depression Scale (SDS; Zung, 1965), the CAGE alcohol questionnaire (Ewing, 1984), and the Post Traumatic Stress Disorder (PTSD) Checklist (Bartone, Vaitkus & Adler, 1994). Two scales were added to the screening program in 2000: the Brief Symptoms Inventory (BSI)-Hostility Scale (Derogatis, 1993), and the Marital Satisfaction Index (Norton, 1993).

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Screening the Force: Modifying psychological screening for deployed soldiers

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Screening the Force: Modifying psychological screening for deployed soldiers

Introduction

Few would argue that the psychological monitoring of soldiers who deploy (e.g., to Saudi Arabia, Kosovo, Uzbekistan) is a responsible health prevention/promotion policy for the military medical community. Stressors are inherent in deployed environments and, in terms of deployment stress, researchers in the military community have demonstrated that these stressors are consistently related to many adverse health outcomes (e.g., Orsillo, Roemer, Litz, Ehlich, & Friedman, 1998). Thus, screening soldiers prior to, during, and after deployments is critical for identifying at-risk soldiers across all phases of deployment operations.

Psychological screening is important in terms of ensuring quality mental health care both for the soldier and for the overall mission that could be adversely affected. There remain a few fundamental questions, however, about how to screen soldiers effectively. What is the best set of clinical screening instruments? How important are contextual variables in determining the best screening instruments? Is there a need to develop screening cut-off scores solely for a military population? How does one determine the efficacy of screening for the military?

In this paper, we present a brief history of the US Army's psychological screening program for soldiers deploying to the Balkans. We follow this with a presentation of the current screening instruments used for deployed soldier mental health and propose modifications to the current screening instruments based on sensitivity analyses and contextual concerns. Finally, we test these modifications and present results and implications.

In 1996, the Office of the Secretary of Defense, Health Affairs mandated psychological screening for all military personnel redeploying from Bosnia. Three screening scales commonly used in clinical research were selected: the Zung Self-rating Depression Scale (SDS; Zung, 1965), the CAGE alcohol questionnaire (Ewing, 1984), and the Post Traumatic Stress Disorder (PTSD) Checklist (Bartone, Vaitkus & Adler, 1994). Two scales were added to the screening program in 2000: the Brief Symptoms Inventory (BSI)-Hostility Scale (Derogatis, 1993), and the Marital Satisfaction Index (Norton, 1993).

Hypotheses

The issue of whether these scales "screen" soldiers effectively is critical for military mental health assets and operational commanders. In this paper, the referral outcome process is used to test the efficacy of the screening program. Because of the burden placed on limited military mental health resources and on commanders whose deployment mission could be affected adversely if soldiers are misidentified, it is important to minimize false positives while balancing concern over false negatives and thus, reach an optimal threshold. We posited that

H1: <u>there would be a reduction in false positive rates by raising the cut-offs on the SDS and BSI</u>.

Additionally, social psychology suggests that the situational context can have a dramatic effect on individual appraisal of health and stress. Key to our study was to determine whether screening scales were appropriate for the context of the Kosovo peacekeeping deployment. We speculated that

H2: the CAGE alcohol questionnaire and PTSD scale may be unnecessary as well as insensitive as screening instruments.

As an organization, the US Army is traditional in nature and family-oriented. Over half of soldier and officers are married, and in the present sample approximately 49% of the deployed force were married. Therefore, as an exploratory question, we sought to determine the efficacy of the Marital Satisfaction Index for the subset of our deployed soldiers who were married. Previous military family research has shown that the military family can be under stress during deployment operations (e.g., Schumm, Bell, & Gade, 2000). We hypothesized that

H3: marital dissatisfaction may be a risk indicator worthy of inclusion in clinical screening for deployed soldiers.

Method

For the present study, we examined the screening scores on the Zung self-rating depression scale and the subsequent referral outcomes of 1,363 US Army soldiers three months following their 6-month deployment rotation in Kosovo. Demographically, 97% were male; 82% were between the ranks of private and sergeant, 15% between the ranks of staff sergeant and sergeant major, 3% officers; 45% were married; 54% were Caucasian, 24% African-American, 13% Hispanic, 4% Asian, and 5% Other.

Results and Discussion

Results supported or partially supported each of the three hypotheses and suggested modifications to the screening program for Balkan deployments. Specifically, we found that increasing the cut-off on the SDS reduced false positives by 10% without significantly reducing true positives rates. This result has implications in terms of

establishing a proper cut-off specifically for a military population. Furthermore, by increasing the cut-off of the BSI-Hostility scale, we reduced the false positive rate approximately 5 %. However, the true positive rate was also reduced, suggesting that adjustment of this scale should be cautiously considered.

We found support for the omission of the CAGE alcohol questionnaire and the PTSD checklist. The CAGE, in particular, had a high false positive rate (62 %). Moreover, soldiers are prohibited from using alcohol during deployment. Including the CAGE warrants consideration at pre-deployment and post-deployment to determine negative coping and rebound effects from the deployment. However, we question the use of this particular index given the false positive rate. Soldiers had an extremely low base-rate exposure for the PTSD scale with around 1% identified through the scale as at-risk. Of the 1% identified, half of these soldiers were false positives. While the PTSD checklist is appropriate for acute situations, we question whether it's necessary in the current Kosovo peacekeeping mission. Research has shown that peacekeeping produces different types of stressors, with a substantial proportion identified as chronic in nature and not acute.

Finally, the Marital Satisfaction Index was a practical identifier of married soldiers at-risk. Roughly 10% of married soldiers exceeded our criteria for a positive screen. Of these married soldiers, only 11% were false positives, while 73% were either referred or identified with family problems. Since single soldiers may suffer from relationship or family problems as well, we propose augmenting this scale with items geared toward single soldier relationships.

The data presented above are part of an on going research surveillance mission. Our hope is to continue to evolve our screening program to provide the most parsimonious set of predictors that are contextually relevant.

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