Intensive Coping Skills Training to Reduce Anxiety and Depression for Forward-Deployed Troops

CDR David E. Jones, MSC USN*; HM1 Kenneth Perkins, USN (Ret.); LCDR Jeffrey H. Cook, MSC USN‡; LT Adeline L. Ong, MSC USN§

ABSTRACT This study provides descriptive information and 2-year outcome data on the first intensive, outpatient, coping skills training program for forward-deployed troops in the Western Pacific Ocean region. Established in February 2003 by the Mental Health Department of the U.S. Naval Hospital in Okinawa, Japan, the Outpatient Crisis Prevention Program was designed as a multidisciplinary training program to reduce anxiety and depression and to enhance the coping skills of active duty personnel. This study describes the rationale for creating the program, the patient population, and treatment outcome data collected during the first 2 years. The Beck Depression Inventory II and the Beck Anxiety Inventory were administered as pretraining and posttraining measures to patients who completed the program between February 2003 and February 2005 (N = 326). Results revealed that the Outpatient Crisis Prevention Program was effective in reducing depression and anxiety symptoms and promoting healthy coping behaviors among participants. Follow-up data indicated that gains were maintained 1 month after treatment.

INTRODUCTION

According to a 2002 Department of Defense (DoD) report, a significant proportion of active duty personnel reported anxiety and depression.1 Service members who reported anxiety and depression also tended to report higher levels of stress at work and in the family. These individuals reported losses in job productivity associated with their symptoms, which suggests a significant reduction in mission readiness.

Approximately 17% of the DoD survey respondents reported anxiety symptoms (e.g., nervousness, feeling edgy, and excessive worry) in the previous month. In general, rates of anxiety decreased with age. Personnel ≤25 years of age reported almost twice the rates of anxiety as did those ≥35 years of age. Women in the lowest ranks reported the highest levels of anxiety. Additionally, more personnel stationed outside the continental United States reported anxiety compared with those stationed within the continental United States (22% and 13%, respectively). Among younger personnel reported depression, compared with older personnel. A larger proportion of military members stationed outside the continental United States reported depressive symptoms, compared with those stationed within the continental United States (22% and 18%, respectively). These findings suggest that interventions aimed at helping personnel cope with anxiety and depression are needed to promote stress management and improved functionality at home and at work, especially in duty locations outside the continental United States.

At present, there is a small but growing literature on psychoeducational interventions designed to enhance the coping skills of active duty personnel who are at risk for anxiety, depression, or impulse control problems, such as aggression. Coping skills and crisis prevention programs have been developed for a variety of military contexts, but the results have been variable. At the recruit training level, Williams et al.2 reported increased graduation rates associated with a weekly, 45-minute, cognitive-behavioral intervention delivered for 9 weeks. The program was designed to reduce depression among naval recruits by enhancing their sense of belonging and problem-solving skills. However, Cigrang et al.3 found that participation in a two-session, 90-minute, stress management group did not improve the rate of graduation from basic military training for Air Force recruits at risk for early discharge because of mental health problems. In a military occupational setting, Linkh and Sonnek4 demonstrated that a four-session (75–90 minutes per session), cognitive-behavioral, anger management training program reduced workplace stress and enhanced conflict resolution skills among active duty personnel, family members, and civilian employees. However, interpretation of the results was limited because of an attrition rate of ~50% among study participants. In a major medical treatment facility in Portsmouth, Virginia, researchers reported greater decreases in depressive symptoms and substantial cost savings for active duty personnel.
who participated in a structured, 1-week (6 hours/day and 30 hours/week), intensive, outpatient program, compared with personnel treated in a traditional inpatient hospital program.5 The outpatient program in Portsmouth aimed to enhance the stress management and coping skills of participants, to return them to their work environments with full duty status.

Although there is evidence suggesting the value of cognitive-behavioral interventions for military personnel, results have been equivocal and limited. Previous military studies examined programs in major training centers and military treatment facilities within the continental United States. Little is known about the application of structured outpatient interventions for personnel in highly mobile, operational overseas environments. The purpose of this study was to evaluate the effectiveness of an intensive outpatient training program developed for active duty personnel served by a medium-size (80 beds and 1,000 staff members), forward-deployed hospital in Okinawa, Japan.

BACKGROUND INFORMATION
The U.S. Naval Hospital (USNH) in Okinawa, Japan, serves the health care needs of 55,000 active duty personnel, family members, DoD employees, and retirees. The hospital also serves as the primary aeromedical evacuation hub for the Western Pacific Ocean region and thus provides medical support to an additional 120,000 joint service personnel in the region. The Marine Corps has the largest number of personnel on the island, with most Marines being organized under the auspices of the III Marine Expeditionary Force. Other major installations on Okinawa that are served by the hospital include Kadena Air Force Base, White Beach Naval Base, and the Army post at Torii Station.

The operational environment on Okinawa is complex, with personnel from the island supporting Operation Enduring Freedom, Operation Iraqi Freedom, and humanitarian aid missions, as well as a number of periodic, multinational, military exercises in the region. Given the intensity and complexity of U.S. military activities in the Western Pacific Ocean region, as well as the diversity of commands served by USNH Okinawa, mental health staff members saw a unique opportunity to provide intensive coping skills training to reduce anxiety and depressive symptoms among forward-deployed troops. Implementation of an intensive outpatient coping skills and crisis prevention program required significant planning and consultation with line and medical leaders. LCDR Juan Carlos Arguello, a USNH staff psychiatrist with previous experience with the Portsmouth program,5 laid the groundwork for the Outpatient Crisis Prevention Program (OCPP) in 2002. He was instrumental in obtaining the funding for equipment and materials for the program, as well as securing appropriate classroom space for the training sessions. Leadership for implementation of the OCPP passed to the first two authors in December 2002, and the training program was launched in February 2003. Critical phases of program development included situational assessment, multidisciplinary consultation, development of the training manual and resources, staff training, and marketing of the program to area providers and leaders.

PROGRAM DEVELOPMENT AND IMPLEMENTATION
Situational Assessment
From the beginning of program development, mental health providers and command representatives agreed that an additional level of mental health service was needed on the outpatient continuum of care. In 2002 and 2003, 4-week, 1- to 2-hour, weekly stress and anger management classes were available via Marine Corps Community Services, and 4-week cognitive-behavioral training groups for depression and anxiety were held weekly at USNH Okinawa. Dropout rates for the depression and anxiety groups ranged from 25% to 50% because of scheduling conflicts and operational commitments. The OCPP was designed to minimize dropout rates among mental health patients by providing coping skills training in an intensive 1-week format. Given the intense operational cycle for most personnel on Okinawa, commanders supported getting their troops help in the time-limited, 1-week, 30-hour format. During OCPP training, commands were requested to release participants from work and watch-standing duties, so that participants could focus on training and homework assignments. Generally, this request was honored and OCPP classes became the “appointed place of duty” for participants.

Multidisciplinary Perspective
Although mental health staff members presented most of the training modules, professionals from other disciplines offered expertise on topics relevant to OCPP goals, to help patients manage stress, anxiety, and depression. Professionals who developed and taught modules included a clinical nutritionist, a physical fitness and health promotion specialist, a chaplain, and a substance abuse counselor. The multidisciplinary training modules were integrated with mental health modules in the form of didactic sessions and workshops. These modules helped OCPP to promote a holistic and multidisciplinary approach to patient care.

Development of Training Manual and Resources
To standardize training, a participant workbook that incorporated evidence-based approaches identified in the literature to help people manage anxiety, depression, anger, and interpersonal problems was developed. OCPP modules integrated information from Cognitive-Behavioral Therapy,6 Dialectical Behavior Therapy,7 Emotional Intelligence,8 crisis counseling,9 and solution-focused therapy.10 Four core skill sets emphasized in OCPP were self-awareness and relaxation training, emotion regulation, interpersonal effectiveness, and motivation and resilience (see Table I for an overview of course topics). Through a combination of short lectures, group exercises, individual activities, and
Staff Training

The first three cycles of OCPP were facilitated by the first author, a licensed clinical psychologist, with support from the second author, a senior psychiatric technician and certified substance abuse counselor. After completion of the third course, the second author was designated program director and facilitated the training sessions with support from graduate student interns. Participant evaluations for the courses directed by the psychologist were comparable to those for the courses directed by the senior corpsman. This comparability between instructors was attributed to the standardized teaching format, class schedule, and use of a teaching manual. After the senior corpsman assumed management of OCPP, a licensed provider continued to provide clinical super-

<table>
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<tr>
<th>Time Period</th>
<th>Focus or Skill Set</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
</tr>
</thead>
</table>
| 9:00 a.m. to 10:00 a.m. | Group training    | Introduction; preassessment; initial group; Module 1: understanding symptoms of stress | Review of readings; problem-solving group | Review of readings; Module 12: creating affirmations | Review of readings; problem-solving group | Module 15: creating an action plan/
closure group |
| 10:00 a.m. to 11:00 a.m. | Self-awareness     | Module 2: engaging your relaxation response; Module 3: essential mindfulness skills/video | Relaxation practice; Module 9: recognizing cognitive distortions | Visualization/relaxation practice; Workshop 2: emotional intelligence | Relaxation practice; Workshop 3: letting go of suffering; forgiveness | Post-assessment; class evaluation |
| 11:00 a.m. to noon    | Emotion regulation | Module 4: therapeutic writing; Module 5: identifying and recognizing emotions | Module 10: challenging distortions; Module 11: using thought records | Lifestyle skills | Lifestyle skills | Graduation |
| Noon to 1:00 p.m.    | Lunch              | Lunch                                      | Lunch                                      | Lunch                                      | Lunch                                      | Staff administration |
| 1:00 p.m. to 2:00 p.m. | Interpersonal effectiveness | Module 6: recognizing and rating moods; Module 7: identifying automatic thoughts Module 8: strengthening positive emotions; Workshop 1: resilience and change | Video training; understanding anger | Module 13: understanding assertiveness | Lifestyle skills | Staff administration |
| 2:00 p.m. to 3:00 p.m. | Motivation and resilience | Stress inoculation training/video | Module 14: handling and resolving conflicts/dealing with difficult people | Workshop 4: moving on, dealing with setbacks, relapse prevention | Staff administration |
| 3:00 p.m. to 3:30 p.m. | Wrap-up            | Review; assignments: Feeling Good, chapters 3 and 4 | Review; assignments: Emotional Intelligence, chapters 2, 5, and 6 | Review; assignments: Feeling Good, chapter 6; Emotional Intelligence, chapters 10 and 11 | Review; assignment: Feeling Good/Emotional Intelligence, own choice | Staff administration |

TABLE I. OCPP Course Topics and Weekly Training Schedule

Discussion of teaching clips from popular films (e.g., As Good As It Gets, Ordinary People, October Sky, and The Legend of Bagger Vance), participants learned specific coping skills, including building emotional awareness, problem-solving strategies, breathing and muscle relaxation, challenging distorted thinking, and conflict resolution. Participants were assigned in-class projects, workbook activities, homework assignments, and readings from selected books, including Feeling Good by David Burns, Emotional Intelligence by Daniel Goleman, and Anger Kills by Redford and Virginia Williams. Start-up costs for the classroom furniture, television and videotape player, computer equipment and projector, and reading materials were $7,500.
vision and was always immediately available for consultation regarding any patient care issues that emerged during training sessions.

**Marketing the Program**

Communication about OCPP was conducted through multiple venues. First, internal referral sources (e.g., USNH mental health providers and family practice physicians) were briefed about the program and referral process. Second, mental health professionals assigned to Marine Corps, Air Force, and Army units were informed about OCPP. Third, an article about the program was printed in the *Stars and Stripes*, which gave OCPP regional notice. Also, the local Armed Forces Network channel aired a television news spot about the program. Finally, chaplains, substance abuse counselors, and other counseling professionals were informed about OCPP and the referral process. Generally, commands supported having their troops attend the training, and “word-of-mouth” referrals became a mainstay as graduates of OCPP reported positively about their experiences to their primary providers and local commands.

**Participant Profile**

Participants in this study included all personnel who completed OCPP training between February 2003 and February 2005 (*N* = 326). This period encompassed ~40 class cycles, with each class typically operating at a seating capacity of 8 to 12 participants. The waiting list was ~2 to 4 weeks.

Approximately 56% of patients were referred by outpatient mental health providers on Okinawa. Approximately 34% of patients were referred from the inpatient psychiatry service when OCPP was recommended as part of a patient’s discharge treatment plan. Approximately 10% of patients were referred by primary care providers or off-island providers. Off-island participants came from ships and other Army and Air Force commands based on mainland Japan, as well as from Guam and Diego Garcia.

During this 2-year period, 345 individuals started the classes; 19 people dropped out of treatment because of work conflicts, emergencies, lack of motivation or interest, or medical problems. Most dropouts occurred on the first day. Overall, the completion rate was high, with 95% of participants completing OCPP. Among completers, 70% were male and 30% were female, and the average age was 22 years (SD, 5.76 years). In terms of service affiliation, 62% were Marine Corps, 33% Navy, 3% Air Force, and 2% Army. In terms of primary diagnoses, 40% were diagnosed as having adjustment disorders, 26% mood disorders, 8% anxiety disorders, and 25% other diagnoses. Patients with psychotic disorders or active substance abuse disorders were excluded from participation. Patients with personality disorders were accepted into the program, but personnel were excluded if they were in the process of administrative separation because of unsuitability.

**Instruments**

Three standardized instruments were used to collect pre-treatment and post-treatment data on the symptom levels and health-related behaviors reported by participants. The Beck Depression Inventory, Second Edition (BDI-II), is a 21-item, self-report scale measuring the severity of depressive symptoms, with higher scores indicating greater severity of depression. The Beck Anxiety Inventory (BAI) is a 21-item, self-report scale measuring the severity of anxiety symptoms, with higher scores indicating greater severity of anxiety. Both the BDI-II and BAI are well supported in the literature as having good reliability and validity. The Therapy Effectiveness Monitoring Scale (TEMS), a locally developed measure, is a 35-question, Likert-scale measure whose scores range from 0 to 180, with higher scores indicating greater pathology and distress. The TEMS assesses four content domains, namely, (1) symptom (e.g., insomnia, panic attacks, worry, and sadness) presence and severity; (2) level of distress about symptoms and other key areas, such as physical health and future; (3) level of functional impairment in multiple roles, such as work performance and home life; and (4) health-related behaviors, such as positive coping skills, exercise, smoking, and drinking alcohol. In an exploratory study, the TEMS showed adequate reliability and validity as a generic measure of outcomes in mental health care (J.H. Cook, J. Garza, and D.E. Jones, unpublished data).

The assessments were administered to participants on three occasions, that is, before treatment (time 1), immediately after treatment (time 2), and at a 1-month follow-up session (time 3). The BDI-II, BAI, and TEMS were administered on the first day of OCPP, before the start of classes (time 1). The instruments were administered again on the fifth day of OCPP, at the close of the last session (time 2). A post-training feedback questionnaire was also administered, to assess ways to improve the program, as was a Likert-scale self-report on perceived levels of improvement attributable to OCPP participation. All participants were invited to a 1-month follow-up session, during which the instruments were readministered (time 3). Seventy-two participants (21%) provided 1-month follow-up data regarding symptom levels. Treatment outcomes were evaluated through comparison of pre-training and post-training test scores and analysis of the feedback questionnaires.

**RESULTS**

Differences between time 1 and time 2 were assessed with *t* tests (*N* = 326), and significant decreases in depression, anxiety, and overall distress levels between the pretraining and posttraining assessments were seen (Table II). Differences between time 1 and time 3 were assessed with *t* tests. Significant decreases in depression, anxiety, and overall distress levels between the pre-treatment and 1-month follow-up assessments were seen (Table III). Results indicated that reductions in depression, anxiety, and distress levels were comparable to those found immediately after training, at time 2. Therefore, therapeutic gains from the training seemed to be maintained at the 1-month follow-up assessment.
In terms of clinical significance, the BDI-II manual suggests that scores in the range of 20 to 28 indicate moderate levels of depression, scores of 14 to 19 suggest mild depression, and scores of 0 to 13 reflect minimal depression. Participants reported moderate levels of depression at the beginning of training (BDI-II score at time 1, 24) but reported mild levels of depression at the end of the training week (BDI-II score at time 2, 15). At 1 month after treatment, participants continued to report mild to minimal levels of depression (BDI-II score at time 3, 13).

According to the BAI manual, scores of 16 to 25 reflect moderate anxiety and scores of 8 to 15 indicate mild anxiety. Although participants reported mild levels of anxiety at times 1, 2, and 3, results showed significant decreases in severity over time (BAI score at time 1, 15; BAI score at time 2, 11; BAI score at time 3, 9).

As an exploratory instrument, the TEMS does not have cutoff scores for mild, moderate, and severe symptom levels. The initial finding of a decreasing trend, however, indicated that participants reported reduced symptom levels at the post-training and 1-month follow-up assessments (TEMS score at time 1, 74; TEMS score at time 2, 58; TEMS score at time 3, 49). With respect to self-reported improvement scores (0 = feeling worse and 5 = feeling maximally better), most participants rated themselves at 4 of 5 on a postassessment Likert scale. Consistent with literature findings, trends showed that older participants tended to report less distress, anxiety, and depression than did junior personnel.

**TABLE II.** Comparison of Pretraining and Posttraining Outcome Data

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Score</th>
<th>Mean</th>
<th>Difference</th>
<th>SD</th>
<th>t Score</th>
<th>df</th>
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<td>57.67</td>
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**TABLE III.** Comparison of Pretraining and 1-Month Follow-up Scores

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<th>Instrument</th>
<th>Score</th>
<th>Mean</th>
<th>Difference</th>
<th>SD</th>
<th>t Score</th>
<th>df</th>
<th>p</th>
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<td>TEMS</td>
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<td>Posttraining</td>
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DISCUSSION

This study extends previous research in supporting the usefulness of short-term, intensive, outpatient, coping skills training. These findings suggest that intensive outpatient services can benefit active duty service members in an overseas, forward-deployed, high-operational tempo environment, in decreasing levels of anxiety and depression. One-month follow-up data suggest that participants can learn positive coping skills that enable them to maintain reduced levels of anxiety and depression for at least 30 days after completing treatment. Participation in the OCPP did not completely eliminate anxiety or depressive symptoms but did give service members a set of tools to improve their coping.

Informal interviews and anecdotal feedback from psychology and psychiatry providers from the hospital, Marine Corps units, and the Air Force Life Skills Center (N = 10) indicated that providers perceived benefits of coping skills training for their patients. At least three providers commented that the intensive training format saved them from having to conduct many hours of individual therapy with their patients. Given the mobile nature of the patient population on Okinawa, it was not possible to determine with any precision how many administrative separation recommendations and/or medical evacuations were avoided because participants completed OCPP. However, the consensus among joint service providers was that OCPP helped to reduce personnel attrition and the number of psychiatric admissions. For patients who had been psychiatrically hospitalized before attending OCPP, the availability of an intensive outpatient program facilitated discharge planning and might have helped to reduce the average length of inpatient stays during the study period from 5 days to 4 days.

Success or failure in OCPP also helped to determine a person’s suitability for full duty. Failure to complete or to benefit from the coping skills training served as an indicator of continued poor occupational and interpersonal functioning. Because the program represented the most intensive level of support that could be offered to patients in the region, the degree to which participants used the training could be construed as a motivational marker and sample of functioning. Participants who did not adequately use coping skills to help them manage stressors, depression, and anxiety were most likely to engage in problematic behaviors that made them ongoing administrative burdens to their commands, poor risks for continued military service, and candidates for administrative separation.

Anecdotal written feedback from participants was positive. A sampling of comments about what participants liked most about training included the following statements. A male gunnery sergeant in the Marine Corps stated, “I liked the progression of the material. It made sense. We started by learning how to recognize and understand things and progressed into how to manage and overcome problems.” A female senior corpsman in the Navy stated, “I was hesitant at first. Being a provider myself, I questioned if I could be assisted at a group level given my age and rate, but once my guard was down, I could relate to many aspects.” A female
senior airman in the Air Force stated, “I liked finding out that I’m not truly crazy and that there are other people with the same feelings and thoughts.” A male corporal in the Marine Corps stated, “It was helpful to realize that many of my dark feelings come from cognitive distortions, and now that I have recognized them, I can deal with them.”

Several important limitations must be noted. This study evaluated pretraining and posttreatment data, but no control group was used. Therefore, we cannot definitively state that positive benefits from symptom reduction in depression, anxiety, or levels of distress were solely related to the coping skills training program. An alternative explanation might be simply that participants benefited from being off work for 1 week and out of environments that many participants perceived as significant sources of stress. Additionally, many participants had begun trials of psychotropic medications in the weeks or months before their attendance in the training. Those patients might have begun to experience the therapeutic benefits of a medication regimen. Such benefits could translate into improved mood scores, apart from the OCPP training itself.

Even with these caveats, there is room for optimism regarding the value of coping skills training for military members in high-operational tempo, overseas environments. As the 2002 DoD report suggested, military members and family members are vulnerable to more stressors in an overseas environment and experience greater levels of stress, anxiety, and depression. There is a need to provide services to help individuals manage stress, anxiety, and depression, and this need on Okinawa was met with the development of OCPP.

In addition to addressing mental health needs, the intensive 1-week format of OCPP met the operational demands of military commands that needed their personnel for frequent deployments and critical missions. OCPP training was effective in reducing anxiety and depression and increasing the coping ability of participants for at least 30 days after treatment completion. Future studies should examine whether reductions in anxiety and depression are maintained over longer periods, such as 6 months or 1 year after treatment. It is the finding of this study that intensive outpatient programs can deliver cost-effective, evidence-based treatments that provide immediate relief of depression and anxiety symptoms and promote improved coping for at least 1 month after treatment.

ACKNOWLEDGMENT
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REFERENCES