

# ***Brief Research Report***

## **Improving Combat Stress and Depressive Symptoms in Veterans and Post-Deployment Service Members of OEF/OIF: Assessing the Potential Benefits of a Web-Based Computerized Cognitive Behavioral Therapy and Peer-to-Peer Support Intervention**

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### **Abstract**

**Background:** Current military involvement in Afghanistan (Operation Enduring Freedom - OEF) and Iraq (Operation Iraqi Freedom - OIF) has created unforeseen burdens on the mental health and well-being of US service women and men. Although OEF/OIF service members and veterans are at high risk of developing sub-threshold combat stress and depressive symptoms or full disorders in the post-deployment period, only a small fraction ever receive care. The VETS PREVAIL Intervention, which combines Cognitive-Behavioral-Therapy-based (CBT-based) coping skills training with peer-to-peer support and counseling, was specifically designed to offer the returning OEF/OIF service member or veteran an accessible and confidential first step to care.

**Evaluation Study:** RISE Consulting, lead by Dr. Benjamin W. Van Voorhees, MD, MPH, was contracted to supervise a pilot study of potential benefit, feasibility and safety of the VETS PREVAIL Intervention. We conducted a single group pre/post comparison study of N=50 recent OEF/OIF veterans in the frame work of a phase 1 clinical trial (phase 1). We evaluated feasibility (adherence and satisfaction), evidence of clinical benefit through changes in the following clinical self-report measures: i) symptoms of depressed mood (Center for Epidemiologic Studies Depression Scale, CES-D), ii) post traumatic stress disorder (Post Traumatic Stress Disorder Checklist-Military, PCL-M), and iii) functional status (Short Form 12, SF-12), as well as changes in key attitudes toward mental health care seeking (intent to seek treatment, mental health self-efficacy and stigma). We also monitored carefully for any ill effects or adverse events.

**Study Results:** This was a diverse study population, and most participants had never received a diagnosis of depression (N=43, 86%). Follow-up was 76% (N=38) at 4 weeks, 74% (N=37) at 8 weeks, 82% (N=41) at 12 weeks and 58% (N=28) for the post study attitudes questionnaire. With regard to feasibility, study participants demonstrated substantial adherence to the Intervention, completing a mean of 4.04 e-Learning Lessons (SD=2.45), 6.02 Chats (SD=5.06), and typing 3,025 characters in the Chats (SD=3,410) and satisfaction ratings in the 'agree' to 'strongly agree' range. Depressed mood declined from screening (11.76, SD=3.50) to baseline (8.90, SD=4.02), to 4 weeks (6.89, SD=4.38) and changes were sustained to 8 weeks (7.84, SD=3.59) and 12 weeks (7.15, SD= 4.82) with p-value comparisons with screening all <.0001 (not significant only for baseline to 8 weeks). PCL-M score declined significantly from baseline (34.95, SD=10.79) to 4 weeks (30.02 SD=9.72) and was borderline significant from baseline to 12 weeks (31.07, SD=11.55). Functional status (SF-12 scores) showed a trend toward improvement in both the mental component and composite scores during the study. There was a significant improvement in intent to seek mental health services related to developed symptoms of a post traumatic stress disorder or depression.

**Conclusions:** An Internet-based program combining CBT-based coping skills training and peer-to-peer support and counseling demonstrated the potential for both promoting mental health and acting as a first step to care by engendering more favorable attitudes toward treatment-seeking, and may be feasible and acceptable to post-deployment service members and veterans.

## Background

Current military involvement around the world has created unforeseen burdens on the mental health and well-being of US service women and men.<sup>1</sup> Since 2001, the United States has deployed approximately 1.7 million troops to operations in Iraq and Afghanistan alone.<sup>2</sup> Several studies have shown that service members returning from operations in Iraq (Operation Iraqi Freedom – OIF) and Afghanistan (Operation Enduring Freedom – OEF) are at high risk of developing sub-threshold combat stress and depressive symptoms or full disorders in the post-deployment period.<sup>1-5</sup> (In the interest of brevity, the term “service member” will often be used to refer to the entire population / sample group of both veterans and post-deployment service members throughout this report.) The research of Hoge & Castro *et al.* has shown that, of service members who met the criteria for one of these disorders, only 38 to 45% indicated an interest in receiving help, and furthermore, within the previous year, only 23 to 40% reported actually receiving professional help.<sup>3,4</sup>

The VETS PREVAIL Intervention was specifically designed to offer the returning OEF/OIF service member an easily accessible and completely confidential first step to care and to promote his/her general well-being.

## Methods

Prevail Health Solutions developed an Internet-based intervention to promote the mental health of returning service members as a first step to care. The Intervention involves Cognitive Behavioral Therapy (CBT) coping skills training and peer-to-peer support and counseling. A “phase 1” feasibility pilot study was conducted with N=50 recently returned service members.

### Intervention Overview

The VETS PREVAIL Intervention was designed as a public health promotion tool specifically for use by current and former OEF/OIF service members who have recently returned from deployment. The Intervention uses self-monitoring, CBT-based coping strategies,<sup>6,7</sup> and peer-to-peer support,<sup>18</sup> delivered over the Internet and aimed at reducing symptoms of depression and post traumatic stress and improving quality of life.

The VETS PREVAIL Intervention has two primary components that are both delivered over the Internet:

The first component is a structured series of brief *peer-to-peer instant messaging “Chats”* structured

around ensuring effective motivation, engagement, and completion. This component was modeled after Motivational Interviewing (MI) techniques, which were added to provide a framework of engagement.<sup>8-10</sup> Use of MI to increase pro-health behaviors has been extensively documented and more recently demonstrated to increase use of Internet-based interventions.<sup>11-14</sup> The efficacy of coupling MI with Internet-based depression interventions has been demonstrated to reduce the cumulative prevalence of depressive episodes.<sup>14-16</sup> The peer-to-peer contact was provided by a master’s level social worker, as well as by trained and certified combat veterans who have completed the Vet-to-Vet counseling certificate program offered by the Depression and Bipolar Support Alliance (DBSA).

The second component consists of *six 30 minute “e-Learning Lessons”* using standard CBT approaches to reducing depressive and anxiety symptoms and strengthening coping skills. Given its focus on client learning, CBT has been successfully adapted to self-directed psychotherapy models including Internet-based approaches.<sup>17-20</sup>

### Intervention Design and Development

The VETS PREVAIL team initially selected the Coping with Depression (CWD) Course, which has undergone multiple evaluations with demonstrated efficacy for over three decades, including a successful bibliotherapy study, as the primary source manual.<sup>7</sup> The e-Learning Lessons were built through the ADDIE model of instructional design which is currently accepted as the e-Learning industry standard for instructional design and performance technology.<sup>39</sup> The iterative nature of the ADDIE model enabled the continuous integration of feedback throughout the design process by a scientific panel of mental health professionals. This ensured high clinical fidelity of the Intervention to the core clinical concepts of CBT. See *Table 1* for an overview of the concepts covered during the six-week VETS PREVAIL Intervention.

**Table 1** *Overview of Clinical Concepts Covered*

|        |                                       |
|--------|---------------------------------------|
| Week 1 | Stress & the Depressive Cycle         |
| Week 2 | Avoidance & Activity Scheduling       |
| Week 3 | Managing Triggers & Reactions         |
| Week 4 | Problem Solving                       |
| Week 5 | Goal Setting & Importance of Routines |
| Week 6 | Self-Care & Review of all Concepts    |

The ADDIE model of instructional design focuses on an iterative process of Analysis, Design, Development, Implementation, and Evaluation, resulting in a targeted training and education program. The

development involved a three-stage process (see Table 2 for an overview of the Intervention development process). At each stage user input was collected and that input used to make follow-on revisions to the respective stage.<sup>7, 10, 21</sup>

**Stage 1: Formative Evaluation & Follow-on Intervention Refinement:** During this first stage of the Intervention development process, a panel of six recent OEF/OIF service member participants and five veteran-familiar clinicians were recruited to provide their feedback on the newly-translated Intervention.<sup>10,22</sup> Feedback received from both groups at this stage included a particular concern over the amount of content covered in the Intervention. The clinical evaluators recommended a six-session structure and limiting content to 30 minutes per session. In order to narrow the scope of the Intervention, the scientific panel determined that a particular focus should be paid to the Behavioral Activation (BA) component of CBT in order to optimize adherence. Additional feedback at this stage was to add brief video narratives to encourage vicarious learning. It was suggested that these video narratives show characters integrating the appropriate weekly lessons into their lives and achieving positive outcomes.

**Stage 2: Summative Evaluation & Follow-on Intervention Refinement:** During this stage of the evaluation a total of 37 recent OEF/OIF service members were recruited and assigned to focus groups over the course of a week for summative evaluation. During the focus groups these 37 service members completed one of the six half-hour sessions of the newly revised Intervention which now focused on the BA components of CBT and included video narratives. Feedback received during this summative evaluation was to increase focus on the "By Vets For Vets" theme and to increase interactivity of the Intervention to maintain engagement. In response, Intervention refinement was conducted to add more emphasis on the "By Vets For Vets" theme and add interactive "Question & Answer" dialogue boxes to encourage engagement based on other successful development models.<sup>7, 9</sup>

**Stage 3: Usability Evaluation & Follow-on Intervention Refinement:** During this final development stage a three week internet usability test was conducted with 28 recent OEF/OIF service members who enrolled in the VETS PREVAIL Intervention online. Primary feedback was to enhance design of the user interface and focus on the safety protocol of the VETS PREVAIL Intervention as a whole. A redesign by a professional usability expert was completed during this stage of Intervention refinement. Also, three scientific advisors with expertise in online safety protocols and procedures worked with the study team to develop a thorough

subject safety protocol that addressed self-harm, harm to others, and high risk or worsening mood.<sup>12</sup>

**Table 2** Development Timeline and Overview

|                |  |          |
|----------------|--|----------|
|                | <b>Initial Translation</b><br>-Iterative translation of Coping with Depression Manual using ADDIE model  | 6 Months |
| <b>Stage 1</b> | <b>Formative Evaluation</b><br>-6 OEF/OIF service member participants panel<br>-5 veteran-familiar clinician panel   | 4 Months |
|                | <b>Intervention Refinement</b><br>-Addition of Narrative Videos<br>-Narrowing of focus to Behavioral Activation components of CBT<br>-6 30-minute sessions               | 5 Months |
| <b>Stage 2</b> | <b>Summative Evaluation</b><br>-One week of focus groups with 37 OEF/OIF service member focus group  | 2 Months |
|                | <b>Intervention Refinement</b><br>-Addition of interactive, Question & Answer dialogue boxes<br>-Reinforcement of "By Vets For Vets" theme throughout the Intervention   | 2 Months |
| <b>Stage 3</b> | <b>Usability Evaluation</b><br>-3 week usability trial with 28 recent OEF/OIF service members recruited online   | 1 Month  |
|                | <b>Intervention Refine &amp; Complete</b><br>-Enhancement User interface design of Intervention & site<br>-Finalization of safety procedures & protocols in Intervention | 2 Months |
|                | <b>Evaluation Study</b>  | 6 Months |

## Evaluation Study

RISE Consulting, lead by Dr. Benjamin W. Van Voorhees, MD, MPH, was contracted to supervise a phase 1 (pilot study of potential feasibility, benefit, and safety) of the VETS PREVAIL Intervention. The overall study design was a single group pre/post comparison study (screening/baseline compared to 4, 8, and 12 week follow-up). The study began recruiting on September 19, 2009 and continued until November 11, 2009 until the planned cohort of N=50 was enrolled. Data collection continued until April 15, 2010. Participants were recent veterans (deployed after September 11, 2001) of operations in Iraq and Afghanistan who were experiencing depression/distress symptoms at the time of screening (CES-D > 8) but who were not considered to be inappropriate for a health promotion intervention (CES-D > 35 indicating severe depressed mood or exhibiting self-harm risk). The Quorum Institutional Review Board Approved this study.

## Outcome Measures

The following Intervention characteristics or goals were evaluated using the metrics described:

### 1. Feasibility:

We measured feasibility by measuring adherence to and satisfaction with the program. With regard to adherence, we report number of e-Learning Lessons completed, number of Chats completed and total number of characters typed in the chats.<sup>14</sup> The user satisfaction domains were based on assessments piloted and used in a phase two randomized clinical trial.<sup>10,14</sup> Service member participants rated their satisfaction (using 1-5 Likert scale, strongly disagree to strongly agree) across three separate domains: 1) *Overall Satisfaction* ("I would recommend Vets Prevail to a friend dealing with combat or post deployment stress"); 2) *Helpfulness* ("I received practical advice about how I can handle my emotions"); and 3) *Personal Relevance* ("The Vets Prevail training program struck a chord with my own life").

### 2. Clinical self-report measures:

We assessed clinical outcomes in three key domains of service member health: 1) depressed mood and general distress; 2) post-traumatic stress disorder symptoms; and 3) functional status, using widely accepted instruments with established validity and reliability.

i) *Depressed Mood* was measured using the Center for Epidemiologic Studies Depression Score (CES-D)<sup>24,25</sup>, at time screening, baseline and weeks 4, 8, and 12 (10-item version used, "CES-D 10"). The CES-D<sup>24</sup> is a self-report measure of the frequency of depressive symptoms over the past week using a 5-point Likert scale. The use of self-report scales like the CES-D as depression case-finding or screening instruments has been successfully validated with both adults<sup>26,27</sup> and adolescents/emerging adults.<sup>28,29</sup> Cronbach alpha has been reported consistently >0.75.<sup>14,25</sup> We also report those classified as being depressed (CES-D 10 score > 9) at screening and most recent follow-up. Previous research supports the use of the scale in epidemiologic research, in needs assessment studies conducted by or for health planners, and as a screening measure.<sup>42,43</sup>

ii) *Post Traumatic Stress Symptoms* were measured using the Post Traumatic Stress Disorder Checklist, Military Version (PCL-M) at baseline, 4, 8, and 12 weeks. The PCL-M is a 17-item self-report measure of the 17 DSM-IV symptoms of PTSD. Respondents rate how much they were "bothered by [problems] in the past month". Items are rated on a 5-point scale ranging from 1 ("not at all") to 5 ("extremely"). The PCL-M asks about problems in response to "stressful military experiences" and has

demonstrated satisfactory reliability and validity.<sup>40,41</sup>

iii) *Functional status* was measured using the Medical Outcomes Study Short Form 12, composite, mental and physical component scores (SF-12), at baseline, 4, 8, and 12 weeks.<sup>30</sup> Paired t-tests were used to compare screening and baseline values with those values at post-Intervention (4, 8, and 12 weeks). The SF-12 is a health questionnaire that examines health-related quality of life across both the physical and the psychological domains and has demonstrated satisfactory reliability and validity in multiple studies.<sup>31</sup>

### 3. Attitudes toward treatment-seeking, mental health self-efficacy and stigma:

We measured participant attitudes toward treatment-seeking, mental health self-efficacy and stigma, all of which have been shown to substantially affect treatment-seeking behaviors.<sup>32-35</sup> The attitudinal items measured have been derived from focus groups and subsequently refined in primary care surveys. These items have demonstrated face-to-face and predictive validity in several studies.<sup>35-38</sup> Participants rated their agreement on a 1-5 Likert scale (1, strongly disagree to 5, strongly agree) to items in three key domains: 1) intent to seek treatment ("I would be willing to consider face-to-face counseling if I had symptoms of Depression or PTSD"); 2) mental health self-efficacy ("I can change my depressed mood by changing my behavior"); and 3) stigma ("I would be embarrassed if my friends knew that I was getting professional help for PTSD or Depression").

### 4. Adverse events/evidence of harm:

A protocol was developed to evaluate individuals reporting risk factors for self-harm and to provide feedback to service members reporting increased depressed mood during the study.

## Analysis

Preliminary descriptive and pre/post comparison analyses are reported in a per protocol approach (participants available for analysis). For descriptive statistics, we report point estimates (means) and standard deviations. We used paired t-tests to compare repeat continuous measures. We used McNemar's test to compare repeat dichotomous measures. Analysis was performed with Excel and STATA 10.0.

## Results

### Study Sample

A total of N=708 completed the screening CES-D, of whom N=457 (64%) met initial eligibility screening, N=53 completed phone eligibility assessment, and N=50 (11% of those passing initial eligibility assessment) were eligible and enrolled. The study

sample was diverse, with 26.5% ethnic minority representation (N=14), a majority of non four-year college degree holders (N=40, 80%), half single or divorced (N=27, 54%), a median income bracket (\$20,000-29,000/year) and a significant minority who were either unemployed or students (N=13, 26%). The great majority had never received a diagnosis of depression (N=43, 86%). Follow-up was 76% (N=38) at 4 weeks, 74% (N=37) at 8 weeks, 82% (N=41) at 12 weeks, and 58% (N=28) for the post-study attitudes questionnaire. Follow-up clinical measurements of at least one time point were available for 100% of participants.

## Study Outcomes

### 1. Feasibility:

The study participants demonstrated strong participation in and adherence to the Intervention, completing on average 4.04 e-Learning Lessons (SD=2.45), 6.02 Chats (SD=5.06), and typing 3,025 characters in the Chats (SD=3,410). Satisfaction ratings were in the agree range for 5 of 7 items and nearly so for the remainder. For example, for the items, "I would recommend VetsPrevail to a friend dealing with combat or post deployment stress" participants reported strong agreement (4.54, SD=0.88).

### 2. Clinical self-report measures:

Changes in the reduction or improvement in the self-report of i) symptoms of depressed mood (CES-D) ii) post-traumatic stress disorder (PCL-M) and iii) functional status (SF-12) are summarized below:

i) *Depressed Mood (CES-D)*: The key study finding was that depressed mood declined significantly from screening (11.76, SD=3.5) to baseline (8.90, SD=4.02, p-value<0.001), from screening to week 4 (6.89, SD=4.38, p-value<0.001), and from baseline to week 4 (p-value=0.015). The observed decline in depressed mood persisted out to week 12. CES-D 10 scores declined significantly from baseline to 4 weeks (p-value=0.015), but not to 8 weeks (p-value=0.123) and at borderline significance at 12 weeks (p-value=0.055). The percentage of participants with CES-D 10 scores >9, declined from 74% to 20% at most recent follow-up (p-value<0.001) (See Figure 1).

ii) *Post Traumatic Stress Symptoms (PCL-M)*: Symptoms of post traumatic stress also declined from baseline (34.95, SD=10.79) to week four (30.2, SD=9.72, p-value=0.011). The observed decline in post traumatic stress disorder symptoms persisted out to week 12 at borderline level of significance (p-value=0.060).

iii) *Functional status (SF-12)*: A trend was shown toward improvement in the SF-12 mental component scores from baseline (40.22, SD=10.80) to week 12 (47.5, SD=10.41, p-value=0.21) and the SF-12 composite scores from baseline (95.50, SD=11.12) to week 12 (98.24, SD=12.78, p-value=0.1834). (A review of the clinical self-report measure results can be found in Table 1 of the appendix.)

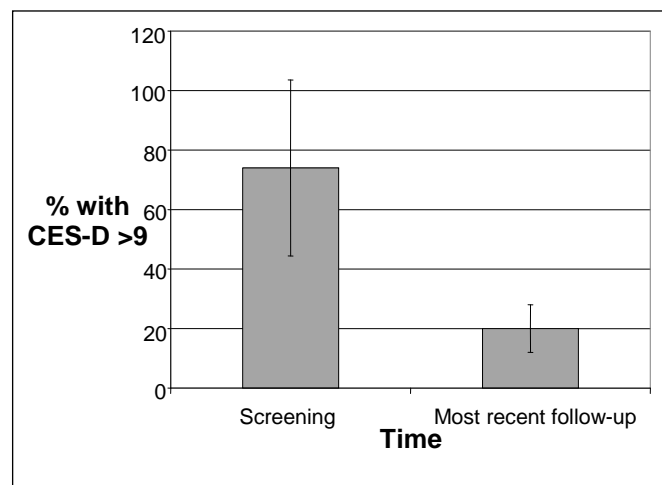
### 3. Attitudes toward treatment-seeking, mental health self-efficacy and stigma:

Improvement in intent to seek treatment and mental health self-efficacy, but not stigma, were noted. With regard to intent to seek treatment, participants indicated much stronger agreement with the statement "I would be willing to consider face-to-face counseling if I had symptoms of Depression or PTSD" (Pre=3.02, SD=1.02 versus Post=4.14, SD=1.01, p-value> 0.001). In terms of mental health self-efficacy, participants agreement with statement "I can change my depressed mood by changing my behavior" increased during the study (Pre=2.60, SD=0.99 versus Post=4.14, SD=0.85, p-value> 0.001). With regard to stigma, participants rated significantly greater agreement after completing the study with the stigma item "If I had depression or PTSD, others would be disappointed in me" (Pre=1.22, SD= 1.07 versus Post=2.14, SD=0.97 p-value> 0.001).

### 4. Adverse events/evidence of harm:

Only one incident of self-harm ideation was detected during the study and this occurred before enrollment. No other events were reported. Service members who reported depressed mood above CES-D 10 =16 or who experienced depressed mood increases were provided with recommendations to seek face-to-face evaluations at their local medical center.

**Figure 1:** % of participants with CES-D scores >9 ("depressed") at screening and at most recent follow-up measurement



## Discussion

### Summary

Evidence-based interventions were successfully translated into an engaging Internet format relevant to the returning service member experience. A diverse group of service members, nearly all of whom had never been diagnosed with or treated for depression, adhered to and reported favorable ratings of satisfaction with the VETS PREVAIL Intervention. Improvements in depression and post traumatic stress disorder symptoms, in the moderate to large effect size range, were sustained to 12 weeks post-enrollment. Similarly, participants reported much more positive attitudes toward intent to seek mental health treatments and self-efficacy for managing symptoms after completing the VETS PREVAIL Intervention. The increase in stigma observed may relate to increased awareness of symptoms and their potential impact on others.

### Strengths/Limitations

A diverse group of service member participants was recruited using an online screening approach and the great majority completed the study (82%). Important limitations include the online recruitment which captured approximately 1/10 of those who screened as possibly eligible. This may have selected for individuals more motivated than those who either did not enroll or never visited the site. We cannot know, without a randomized control trial, what proportion of pre/post changes are the results of specific and nonspecific elements of the Intervention or merely natural history. The significant change in CES-D scores from screening to baseline suggests the possibility that positive expectancies or non-specific intervention effects may explain some pre/post changes. However, the continued improvement in depressed mood and post traumatic stress disorder symptoms after formal study start, high satisfaction ratings and the substantial changes in health seeking attitudes suggests service member participants had consequential encounters with the Intervention.

### Conclusions

These results suggest that carefully developed interventions which balance fidelity to manual-based treatments and careful attention to personal relevance to the user could play an important role in promoting well-being and reintegration for returning service members and veterans. Follow-on studies could include demonstration projects evaluating the impact of VETS PREVAIL in health promotion within defined populations and/or randomized clinical trials comparing the Intervention to wait-list or usual care conditions to determine the degree to which the Intervention benefits post-deployment service

members and veterans over and above these “naturalistic” conditions. An important next step will be determining how to increase the proportion of those initially screened who formally enroll in the Intervention, a key challenge for all Internet-based interventions.<sup>9</sup>

### Disclosures

*Benjamin W. Van Voorhees, MD, MPH, Director, RISE Consulting, supervised the execution, data collection and analysis of study results as an independent agency contracted by Prevail Health Solutions to supervise this evaluation study. RISE Consulting continues to provide analytic and scientific support for Prevail Health Solutions on a set fee basis. Neither RISE nor Dr. Van Voorhees has any ownership stake in Prevail Health Solutions. Brock Hokenson, MBA, an employee of Prevail Health Solutions, coordinated this study, supervised the data collection and prepared the data set, and conducted the data analysis. This is a preliminary data analysis. Further data analyses are underway under the supervision of Dr. Van Voorhees, and a full statistical review is planned prior to publication. Dr. Van Voorhees is an Assistant Professor of Medicine, Psychiatry and Pediatrics at the University of Chicago, but the University was not a party to this study. Dr. Van Voorhees and RISE Consulting have other consulting relationships including Meident, Inc, San Francisco, CA, Social Kinetics, Inc, Palo Alto, CA, The University of Hong Kong and the Chinese International School, Hong Kong, China.*

*Roger Sweis, BA is the President of Prevail Health Solutions and supervised the development of the VETS PREVAIL intervention and was a co-author of the report. Mr. Sweis is an equity holder in the company. Mr. Sweis did not participate in the tabulation and analysis of the evaluation component of this report.*

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**Appendix Table 1: Clinical Outcomes and Time**

| Clinical Scale  | Screening |      | Baseline |       | Week 4 |       | Week 8 |       | Week 12 |       | P-value<br>Baseline<br>vs 4<br>weeks | P-value<br>Baseline<br>versus 8<br>weeks | P-value<br>Baseline<br>versus<br>12 weeks |
|-----------------|-----------|------|----------|-------|--------|-------|--------|-------|---------|-------|--------------------------------------|--|---|
|                 | Mean      | SD   | Mean     | SD    | Mean   | SD    | Mean   | SD    | Mean    | SD    |                                      |  |   |
| CESD-10 Score   | 11.76     | 3.50 | 8.90     | 4.02  | 6.89   | 4.38  | 7.84   | 3.59  | 7.15    | 4.82  | 0.015                                | 0.123                                    | 0.055                                     |
|                 |           |      |          |       |        |       |        |       |         |       | <0.001*                              | <0.001*                                  | <0.001*                                   |
| PCL-M Score     | NA        | NA   | 34.95    | 10.79 | 30.02  | 9.72  | 31.70  | 10.82 | 31.07   | 11.55 | 0.011                                | 0.069                                    | 0.060                                     |
| SF-12 Composite | NA        | NA   | 95.50    | 11.12 | 97.77  | 10.77 | 97.42  | 11.53 | 98.24   | 12.78 | 0.38                                 | 0.311                                    | 0.183                                     |

*\*Comparison with initial screening mean CES-D score at follow time in column*