



# EFFICACY OF MANTRAM PROGRAM ON SLEEP IN VETERANS WITH PTSD

Lindsay Holt PhD, RN<sup>1,2,3</sup>; Jill Bormann PhD, RN, FAAN<sup>1,2</sup>; Taylor Andrews, BA<sup>1</sup>; Lin Liu, PhD<sup>1,3</sup>; Joseph Burkard, DNSc, CRNA<sup>2</sup>  
<sup>1</sup>Veteran Affairs (VA) Healthcare System, Center of Excellence for Stress & Mental Health (CESAMH), San Diego, CA  
<sup>2</sup>Hahn School of Nursing and Health Science, University of San Diego, San Diego, CA  
<sup>3</sup>University of California, San Diego, CA



## BACKGROUND

- The VA Healthcare System is largest provider of PTSD services in the United States; treating over 5M Veterans.
- Impaired sleep is 2<sup>nd</sup> most frequent referral request.
- 87% of Veterans report sleep disturbances.
- Complementary therapies are preferred by the Department of Defense.

## REVIEW OF THE LITERATURE

- Six themes characterize sleep related anxiety: fear, waking up confused, having traumatic thoughts and outbursts while asleep, thrashing in bed, and difficulty returning to sleep once awake.
- Recent reviews of sleep literature describe the need for more research to assess complementary therapies affect on sleep in populations with PTSD, specifically Veterans.
- Tools used to collect information must be valid and reliable, should include larger sample sizes, participants must meet PTSD diagnostic criteria upon enrollment, and assess therapies individually to ensure reliable results of effectiveness.

## MANTRAM PROGRAM (MP)

- Mantram Program (MP) is an adaptation of Eknath Easwaran's Eight-Point Program.
- Provides 3 of 8 points: (1) mantram repetition, (2) slowing down, and (3) one-pointed attention as meditation-based mindful strategies that are practiced outside the traditional solitary process of sitting meditation.
- Bormann and colleagues report symptom improvements in samples representing family caregivers of Veterans with dementia, adults with HIV, and Veterans with PTSD.
- Study participants have verbally reported improved sleep quality, but this study is the first to empirically assess for sleep improvement with MP.

## DESIGN

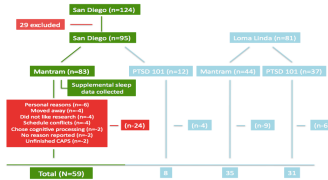
- The design of the study was a review of supplemental sleep data collected in a quasi-experimental, pre-post study design to determine the efficacy of MP on sleep in Veterans with PTSD.

## SPECIFIC AIMS

- Evaluate the efficacy of Mantram Program (MP) on sleep.
- Examine demographics in a sample of Veterans with PTSD who have completed MP.
- Describe sleep quality in Veterans with PTSD.

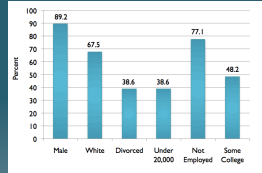
## SAMPLE SIZE

- The sample for this study was extracted from a larger 2 site study involving San Diego and Loma Linda VA locations.
- N=59 Veterans with complete PTSD data.

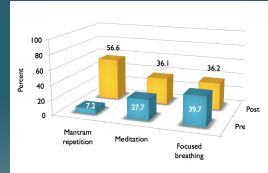


## RESULTS: Pre – Post Test Assessments After 8 Week Mantram Program

Predominant Demographics of the Veteran Sample



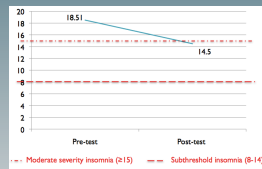
Report of Holistic Practice



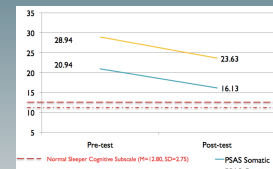
Pre-Assessment Tool Correlations

	1	2	3	4	5	6	7	8	9	10	11
1 CAPS	---										
2 CAPS-B	.79**	---									
3 CAPS-D	.46**	.42**	---								
4 CAPS-D	.66**	.29**	.32**	---							
5 PCL	.69**	.33**	.49**	.49**	---						
6 ISI	.69**	.33**	.33**	.33**	.33**	---					
7 GSES	.35	.27	.32	.33	.42**	.36	---				
8 PSAS	.05	-.12	.04	.35	.40*	.26	.48**	---			
9 PSAS	.34	.17	.31	.31	.33**	.33**	.33**	.33**	---		
10 GSES	-.03	-.09	-.06	-.04	.05	.08	.19	-.02	-.07	---	
11 Pre-test Meditation	-.33	-.13	-.19	-.18	-.08	.26	.20	.21	.43**	.43**	---

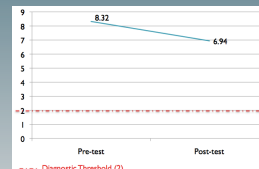
Insomnia Severity Index (n=55)  
 $t(54)=4.73, p<.001, d=.61$



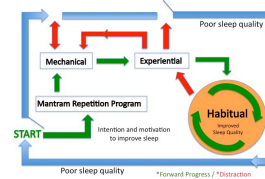
Pre-Sleep Arousal Scale (n=16)  
 Som. subscale  $t(15)=3.10, p<.001, d=.93$   
 Cog. Subscales  $t(15)=4.22, p<.001, d=.75$



Glasgow Sleep Effort Scale (n=16)  
 $t(15)=1.65, p>.05, d=.33$



## IMPROVING SLEEP IN VETERANS



Adapted from Vago & Silbersweig (2012), Prochaska & DiClemente (1992), and Veteran Affairs Healthcare System San Diego (2014)

## INSTRUMENTATION

- Clinician Administered PTSD Scale (CAPS)
- PTSD Checklist Specific (PCL-S)
- Insomnia Severity Index (ISI)
- Pre Sleep Arousal Scale (PSAS)
- Glasgow Sleep Effort Scale (GSES)

## CONCLUSIONS

- Mantram was found effective in improving insomnia, cognitive & somatic pre-sleep arousal using valid and reliable tools to assess changes in sleep quality.
- Results support future research including larger randomized trial of MP to assess improvement of sleep in Veterans with PTSD compared to an active control group.
- A significant relationship was found between sleep and PTSD scores, supported by Morrison (1989) reporting sleep disturbance as the hallmark symptom of PTSD.
- Previous or current use of meditation did not impact pre assessment scores, supporting the effect of the intervention.
- Participation retention rates were higher (29%) than reported mental healthcare research retention (21%). Germain, et al. (2006).

## LIMITATIONS

- No control or comparison group.
- Small sample size for some sleep measures.
- Not generalizable to women Veterans,

## IMPLICATIONS FOR PRACTICE

- Encourages future research of MP on sleep in Veterans.
- Supports the use of complementary therapies for sleep.
- Potentially could decrease sleep medication use.
- Improve Veteran quality of life using a cost effective intervention.
- Addresses the global issues of PTSD symptom burden. Dissemination of MP may expand treatment options.

## References and Acknowledgments

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Thank you to the men and women who have served for our country.