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Insomnia in Returning Service Members: an Early Intervention in Combat Stress

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Disclaimer

- This presentation does not imply approval by the Department of the Army, William Beaumont Army Medical Center, Department of Defense, or the US Government for any of the following methods contained or discussed herein.

- Cognitive Behavior Therapy for Insomnia CBT-I, is used throughout the Armed services via training by the Center for Deployment Health.

- EEG and Autonomic Biofeedback is used at a number of DOD/VA facilities.

Credits for EEG Biofeedback Systems

Thank you for your support:

- BrainPaint Inc.
- Ochs Labs Inc.
- The Sams Center (Dr. Marvin Sams)
- Mind Alive Inc.
- Robert Larson EEG Works

- * Disclaimer: No financial reimbursement associated with the use of these methods/systems

Goals and Objectives

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- Introduce a treatment for insomnia in redeploying combat soldiers
- Discuss Program Evaluation
- Analyze the significance of results
- Appreciate implications for future research

Study design

- Study of treatment for Insomnia in redeployed combat soldiers
- IRB approval
- Group CBT psycho-education Group CPT for negative cognitions followed by EEG Biofeedback
- Pre-treatment measures screen for combat stress
- Population just returning infantry soldiers

Population

- 24 redeployed active duty soldiers within the previous 120 days~ Afghanistan
- Males 21-35
- Deployments (Range= 1-5, ~2.7.)
- Ranks (23 = E-2 to E-7 and 1= Officer (2 Lt)

Population

- MOS
- Years in Service (range =2-14 years ~ 6.8)
- Education (range =12-18 years, ~ 12.75)
- Marital Status- (single (7) married (10) divorced (7)
- Inclusive dates;(27% of 1779 encounters 120 days of the study)

IRB

- Previous research-Neylan 1998
- Insomnia in OEF/OIF Veterans 70%
- Gulf War 6-30%
- Vietnam 62%
- 27% Soldiers seeking BH treatment Primary Dx sleep disturbances.
- Estimate actual % CC 70-90

Cognitive Behavior Therapy for Insomnia

- Sleep hygeine
- Paired stimulus
- Address negative cognitions
- Re scripting repetitive dreams/nightmares

Pre and post treatment measures

- PCL-M Post Traumatic Stress Assessment-Military
- GAD-7 Generalized Anxiety Disorder
- PHQ-9 Patient Health Questionnaire Depression
- Insomnia Severity Index
- Sleep log
- QEEG and IVA

EEG Biofeedback

- 3 Methods-IRB 120 day study plan
- Initial approach Lens (Ochs Labs 3.0) Brainmaster Discovery
- Site sort and Lens mapping
- 2/3 group medically evacuated. Demonstrated higher PTSD scores
- Early redeployers from combat-All Lens subjects exhibited aberrations during tx

Brainpaint protocols

- beta/smr
- Alpha Theta
- With addition of Brainpaint we doubled the participants

Brainpaint

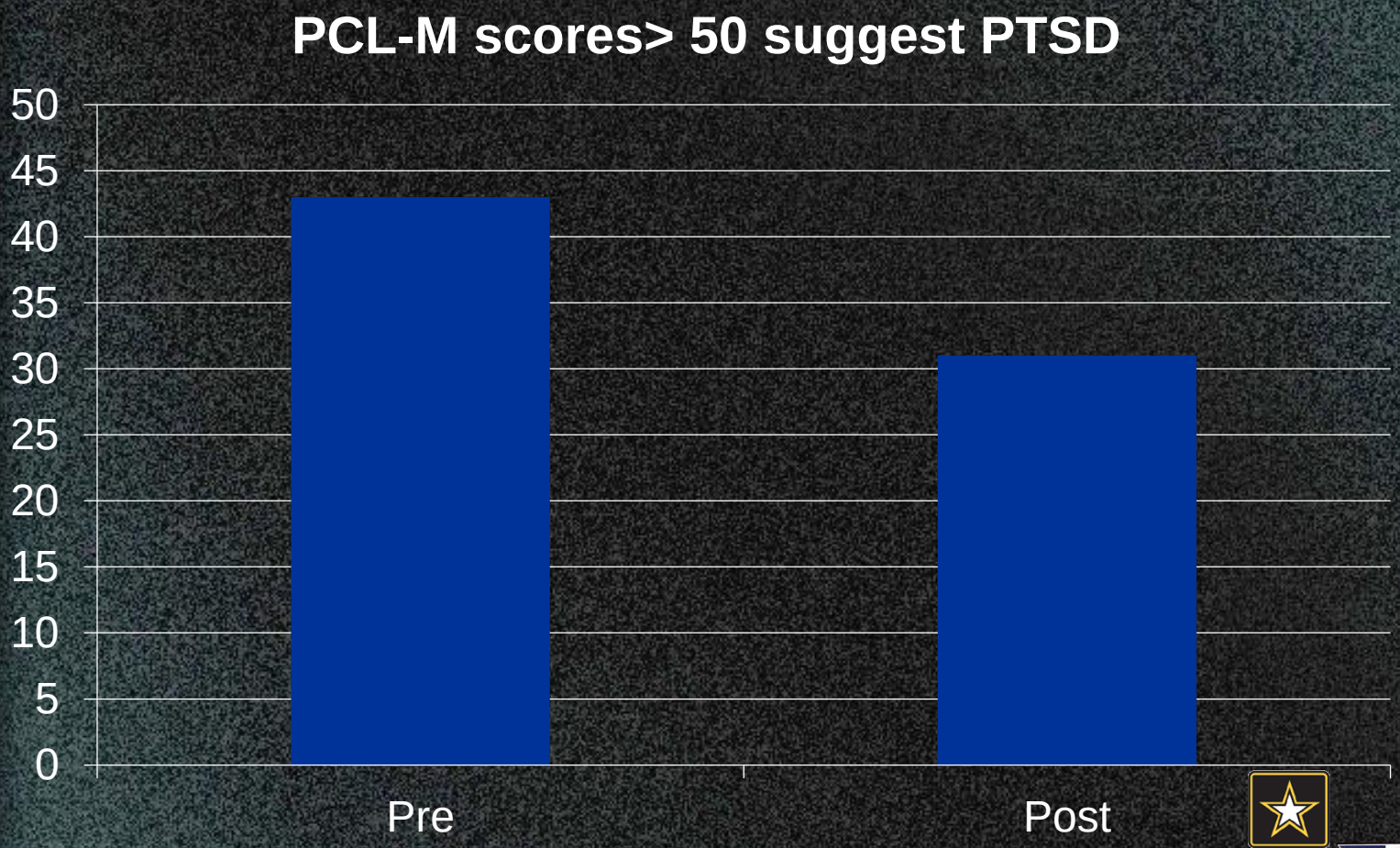
- Some had combat imagery -not significant
- Headaches TBI patients = multiple adjustments to protocol selection
- Nightmares ~ ceased w/I 4-5 tx sessions

Sams

- Final group ~revised version of “Sams” (unique task activated protocols by Dr Marvin Sams):

- AVE- David Pal 5 min protocols
- TCDS-Mind Alive
- Task activated during EEG Biofeedback
- Audio HRV Feedback - Heart math 5 minutes end of tx session
- This group demonstrated highest % of TBI w insomnia - no imagery reported

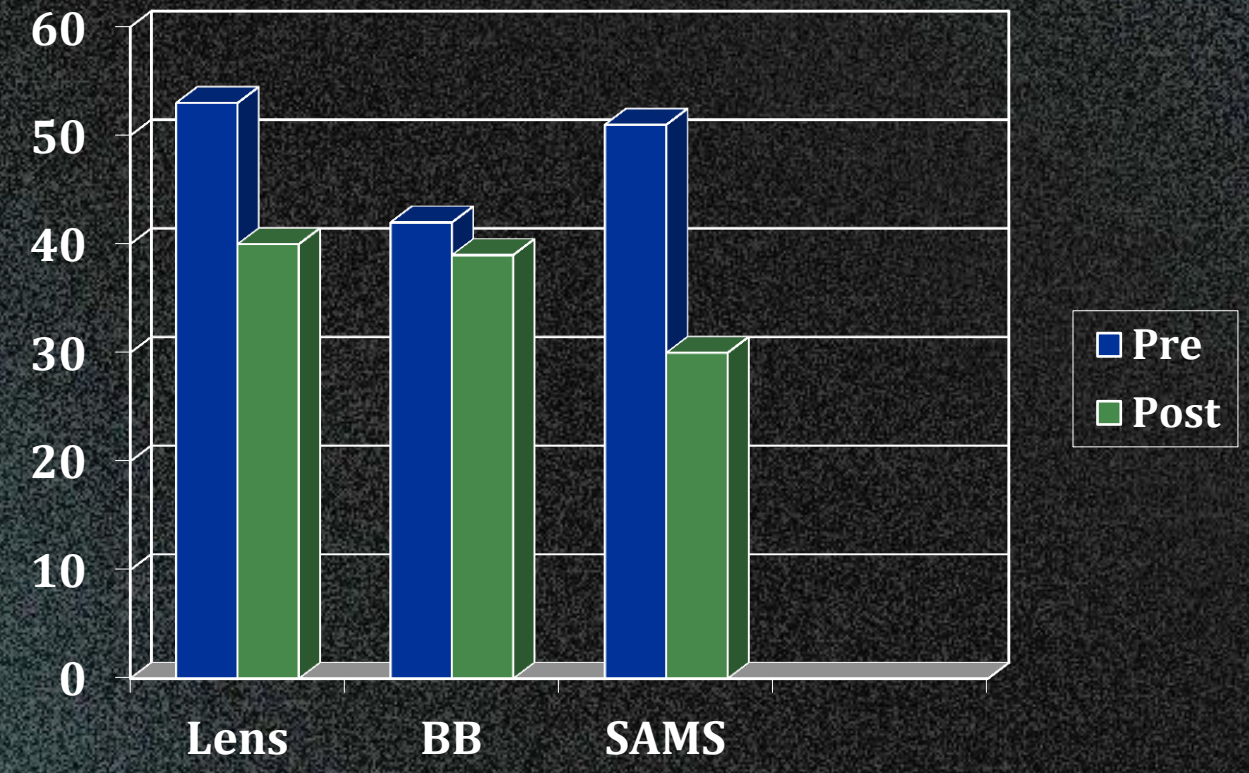
PCL-M sig .001


PCL-M scores> 50 suggest PTSD
50
45
40
35
30
25
20
15
10
5
0
Pre
Post

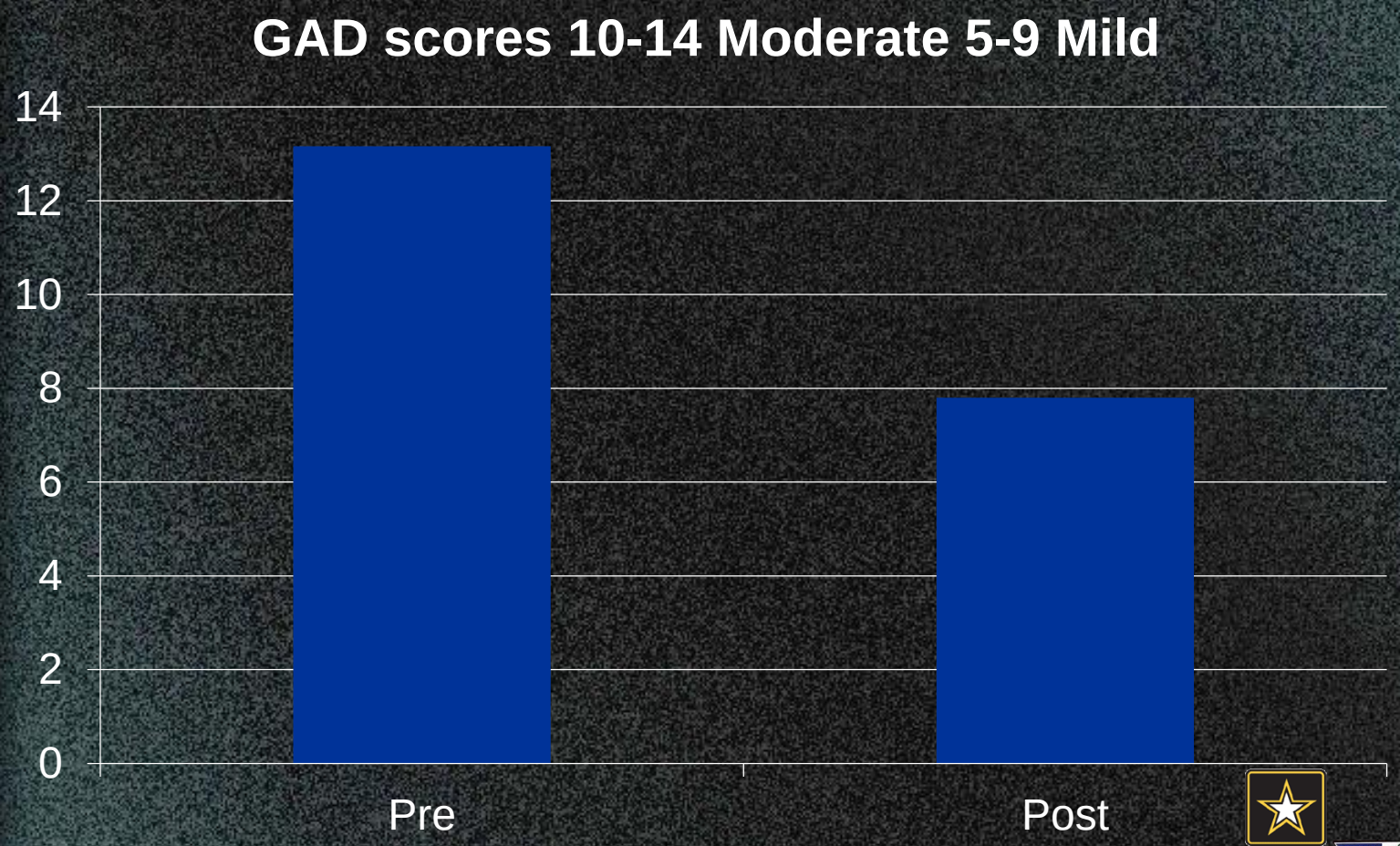
Medication Utilization

- 4 taking psych medications, initially
- SSRI's -no sleep agents
- 2 discontinued all psych meds
- 2 reduced dose levels
- 1 not initially taking psych meds added Prozac & Trazodone

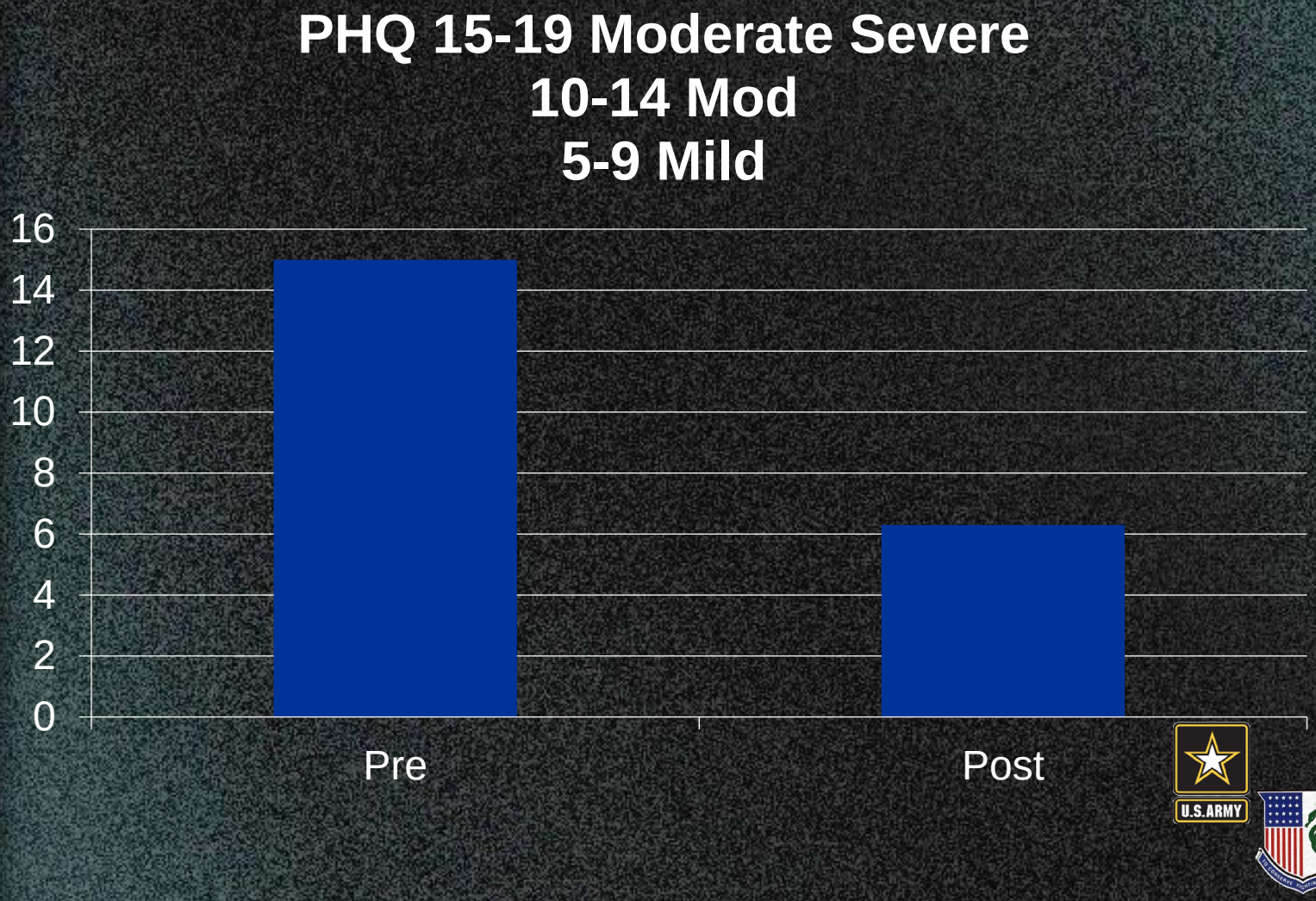
PCL-M pre/ post



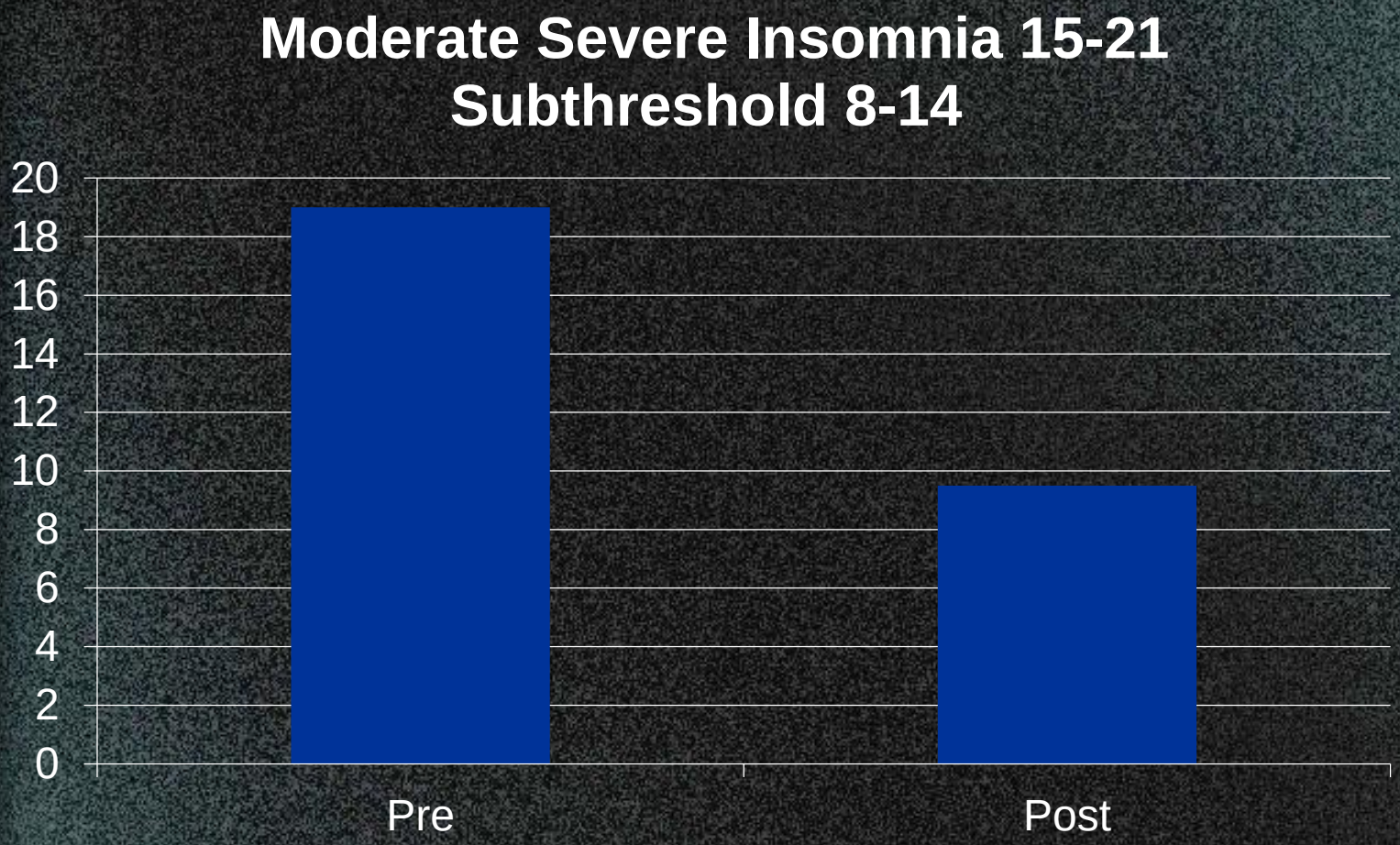
GAD sig .001



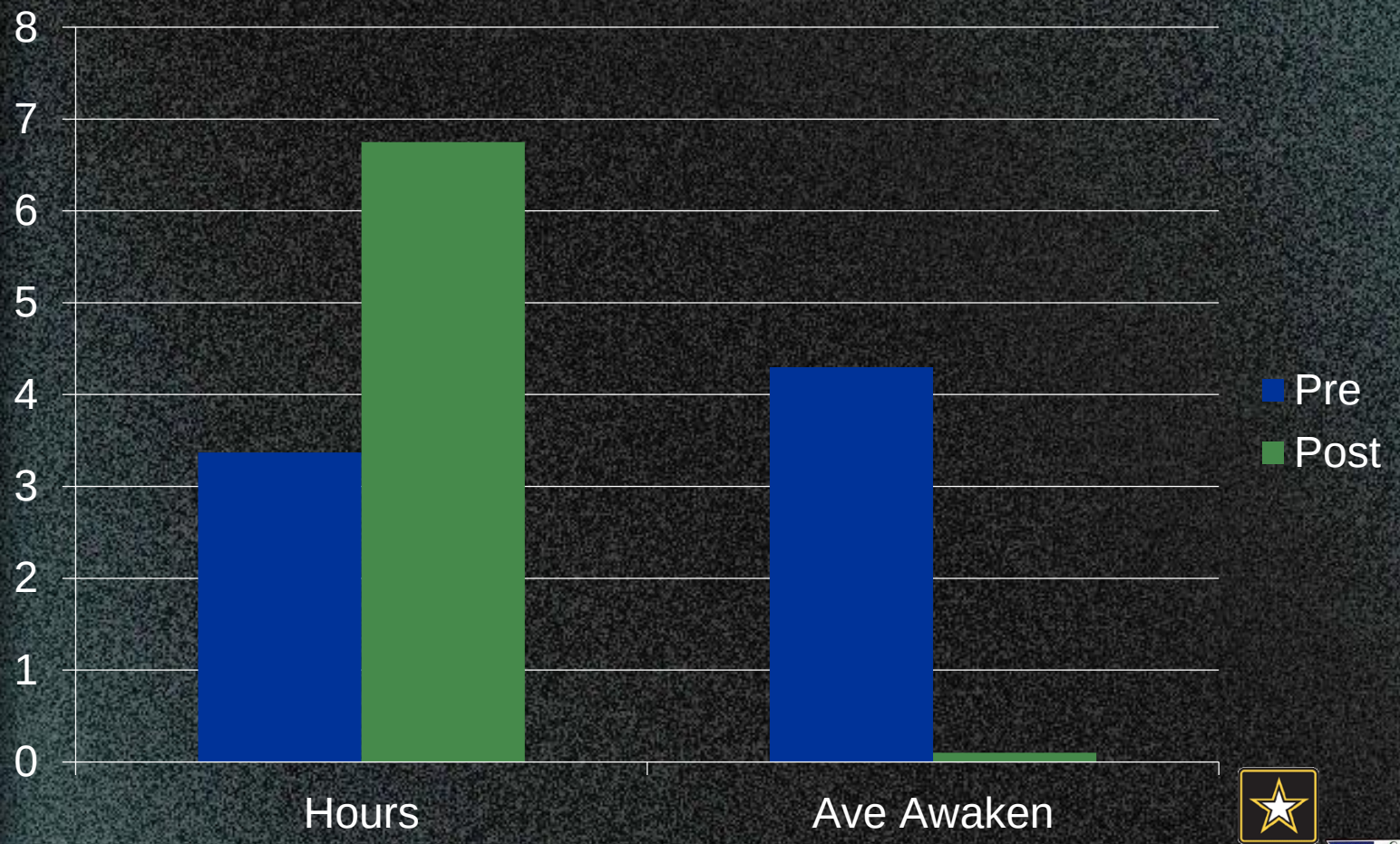
PHQ sig .001


PHQ 15-19 Moderate Severe
10-14 Mod
5-9 Mild
16
14
12
10
8
6
4
2
0
Pre
Post

Insomnia Severity

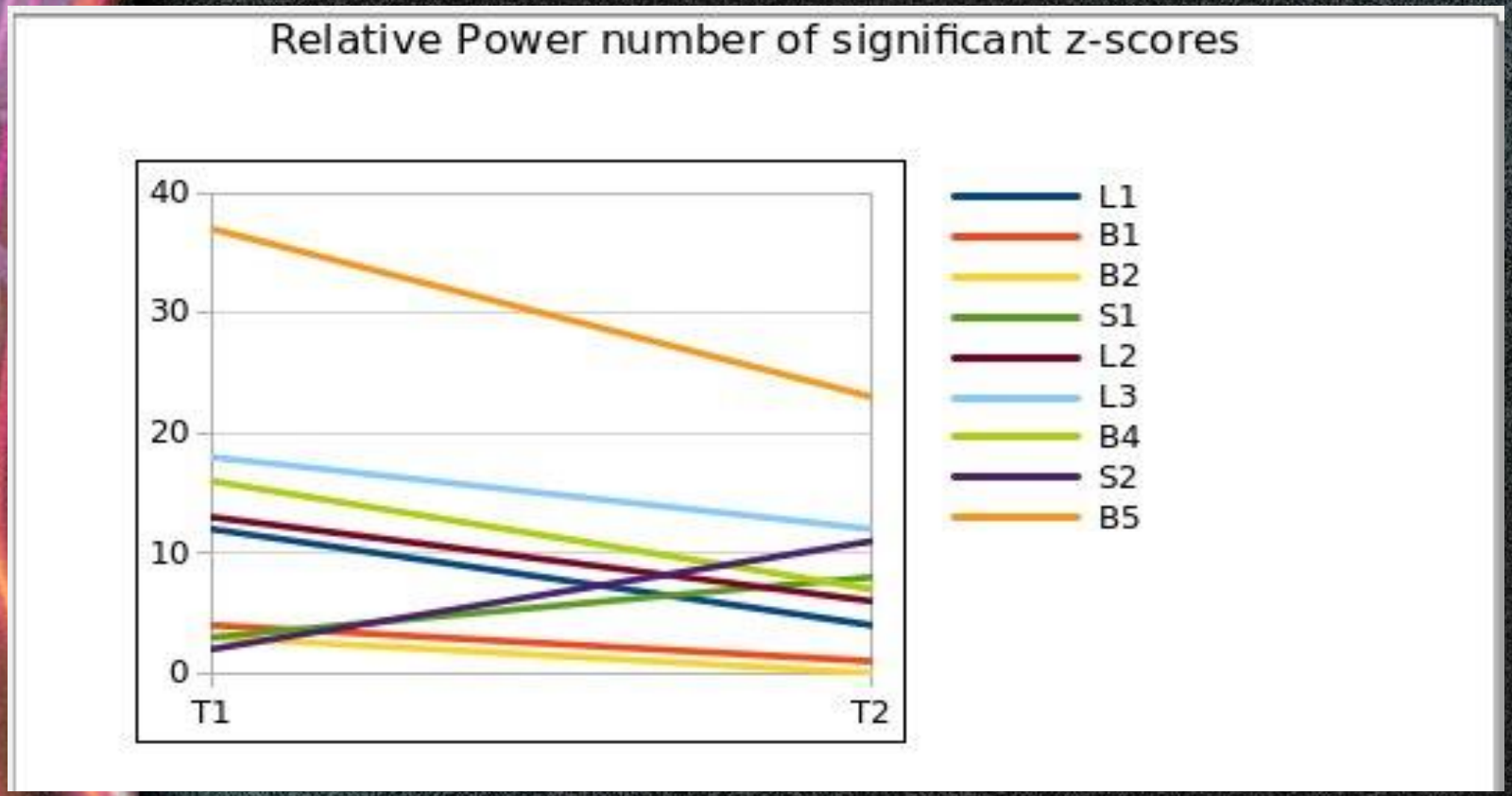


Total Hrs Sleep vs Awakenings

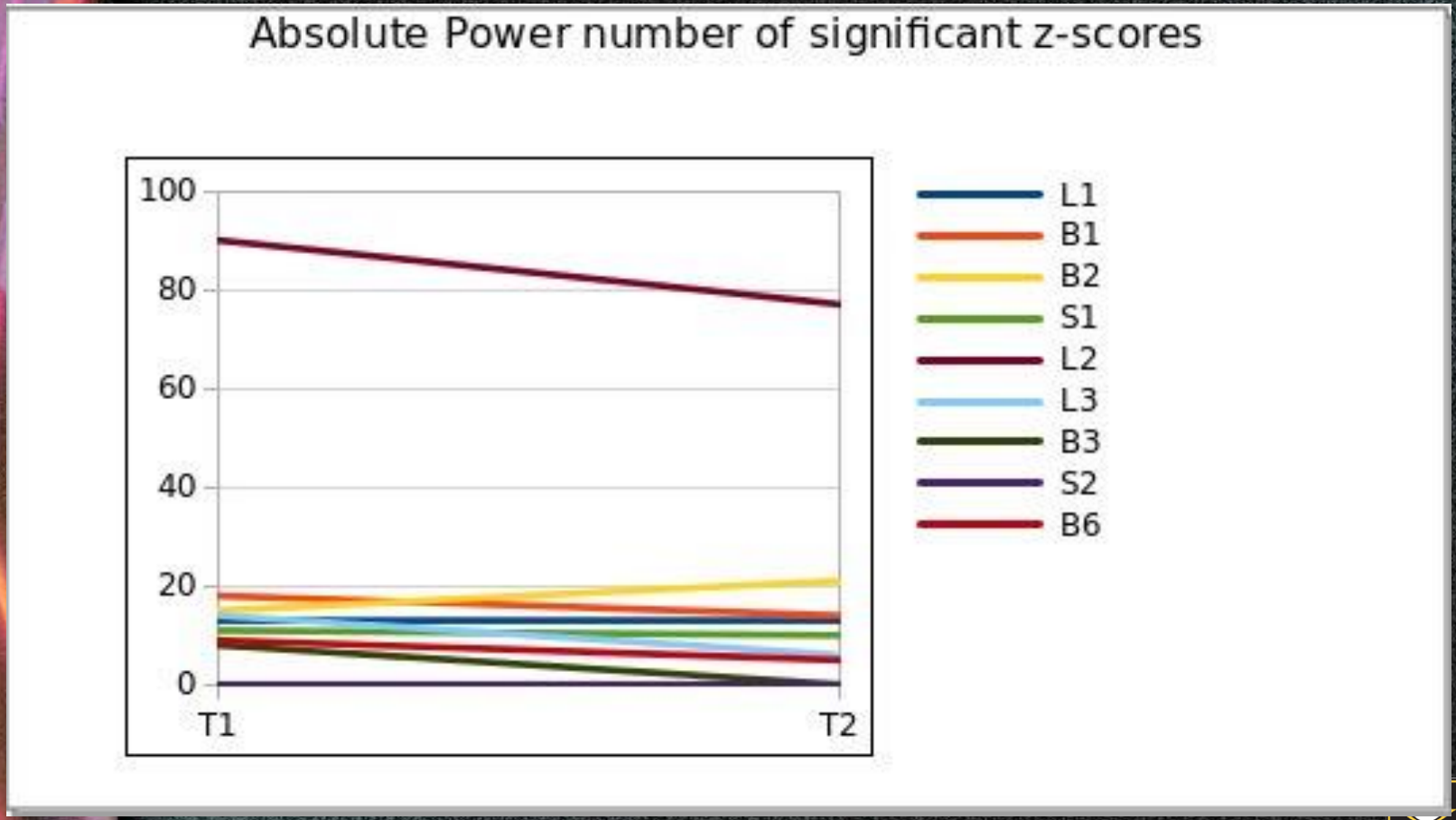


Changes in Z score by Modality

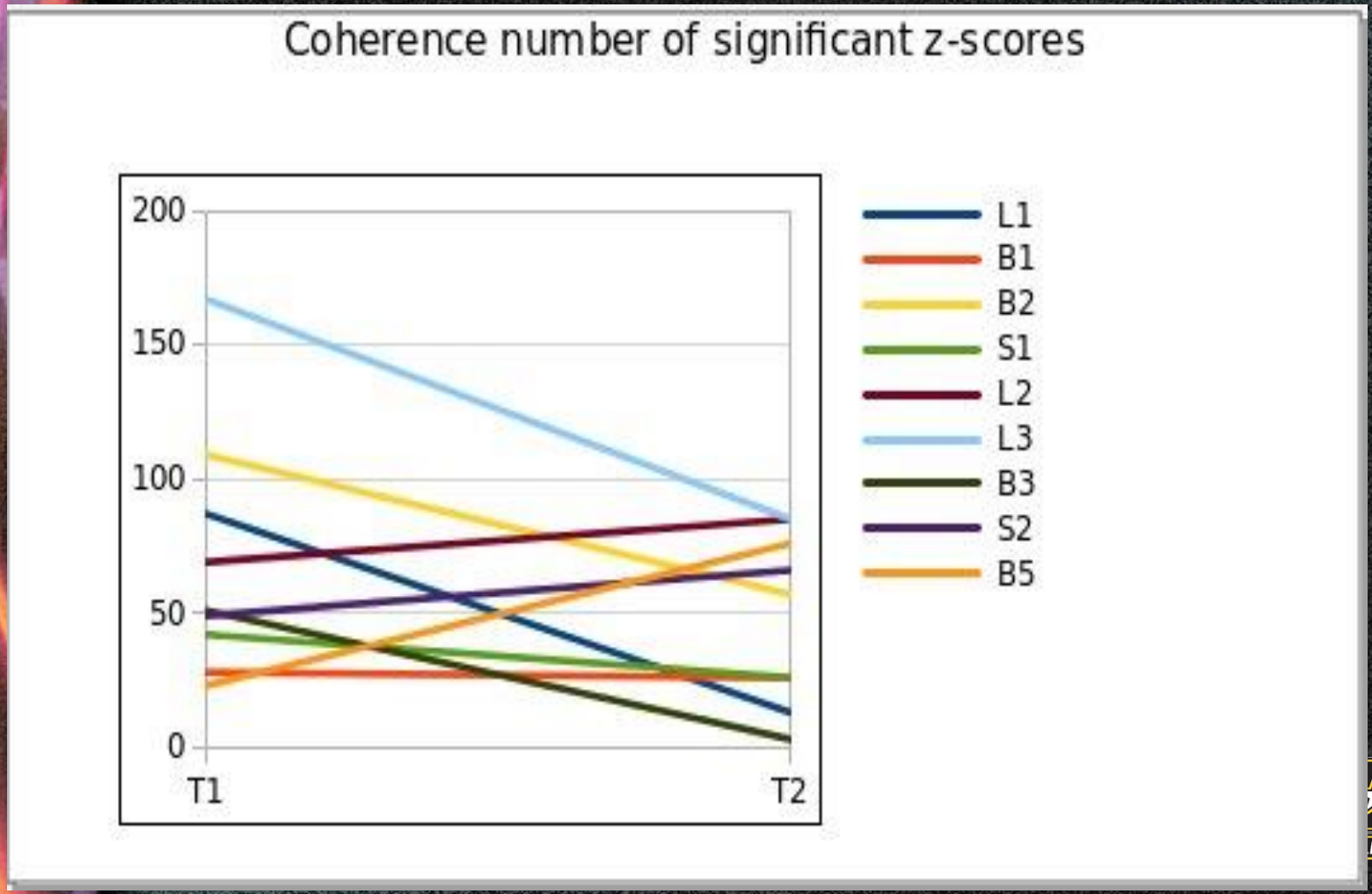
sig =.097 * N=35 for sig



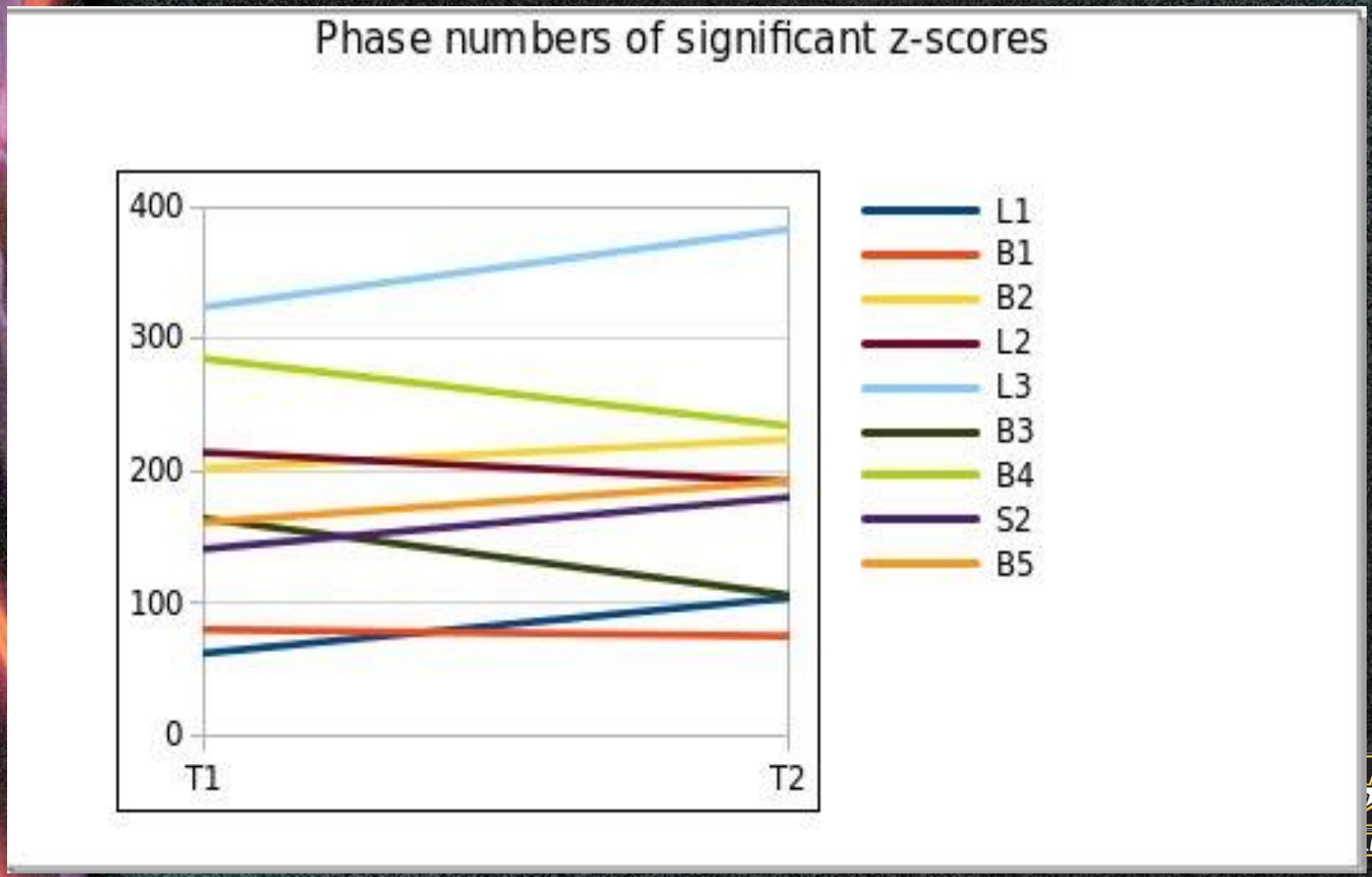
Pre Post change in absolute sig level =.045



Coherence pre/post = sig .065



Overall Phase no change sig =.33



IVA pre post results

- Statistical significance on pre vs post measures
- Full Scale Attention Quotient
- Visual Attention Quotient
- All mean scores of each of the IVA variables improved from the average pre test scores.
- The Post Hyperactivity score increased ~outliers

Insomnia – results

- Increase clinic productivity
- Improve access to care
- Consistently reduce symptoms- to include nightmares
- Suggest efficacy in Expanding current program