



# Neuropsychological Evaluations of Military Traumatic Brain Injury and Post Trauma Stress Disorder.

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## INTRODUCTION

Blast injuries and PTSD in returning veterans from current military operations in Iraq and Afghanistan are the focus of many recent studies. Effects from blast exposure appear to affect cognitive functions though most studies have Ns of approximately 50 subjects.

## OBJECTIVE

This study explores demographics and results of neuropsychological evaluations for a community based sample of 797 active duty military members who were referred to clinical neuropsychologists because of reported cognitive and psychological changes post deployment.

## METHOD

A total 1,266 individuals were evaluated. However, only 797 were included in the present study due to highly restrictive inclusion limitations (e.g. age, repeated evals, etc.)

The evaluation procedure is a modified neuropsychological "Blast" battery which includes 3 hours of clinical interview and 7 hours of neuropsychological tests administered over two separate testing sessions.

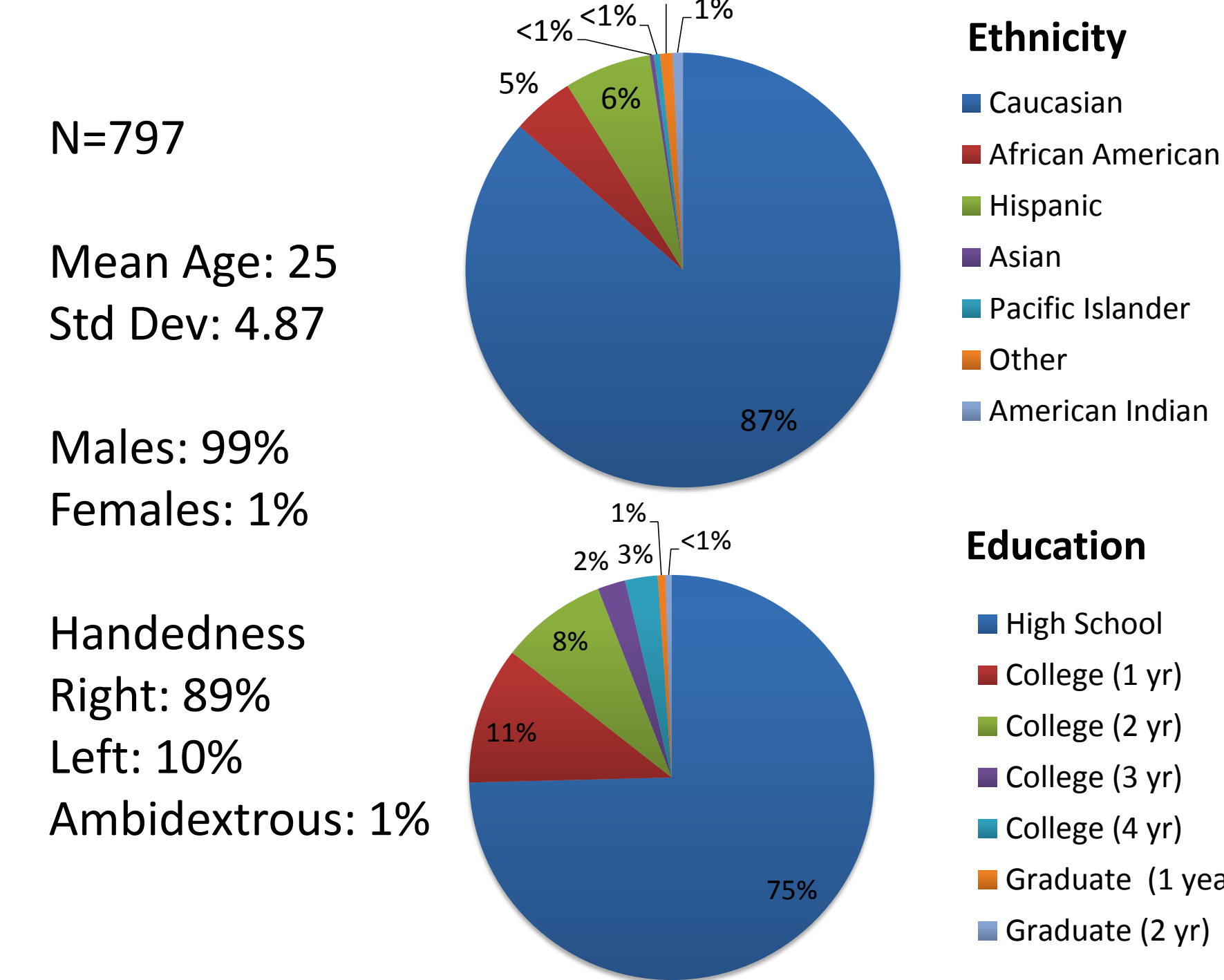
- CVLT-II
- COWAT
- Groove Pegboard
- Grip strength
- Trails Making
- Hayling and Brixton
- MMPI
- Stroop
- TOMM
- TSI
- WAIS-III/WAIS-IV
- MWS-III/MWS-IV
- WRAT-IV

The descriptive demographics include;

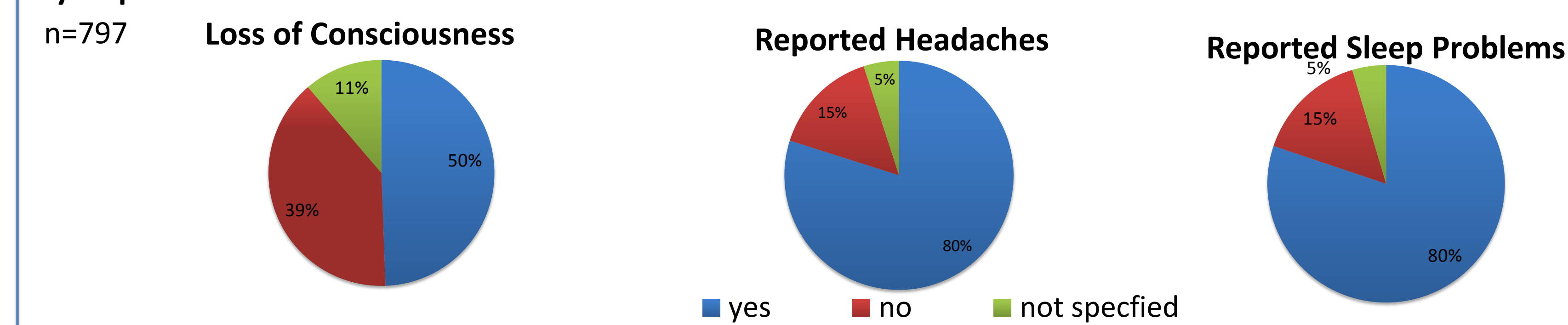
- Basic demographics
- Symptoms
- Blast profile
- ASVAB scores (premorbid)

Data was compiled via a private practice associated with Camp Lejeune, North Carolina. All individuals participated through the Tricare health care program and were referred by various military neurologists or other medical officers. The UNCW Office of Research reviewed and provided IRB approval.

## Sample Demographics



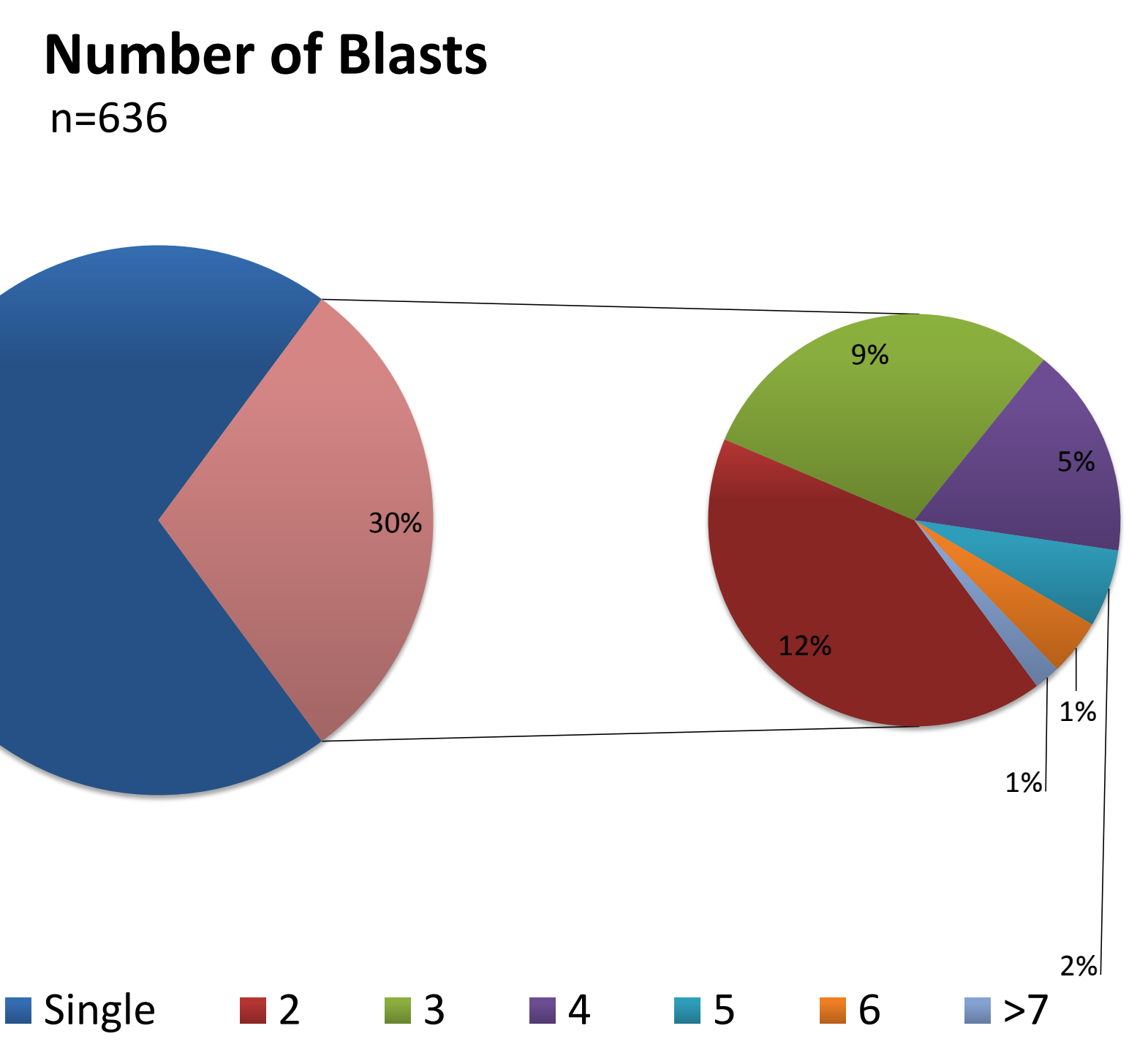
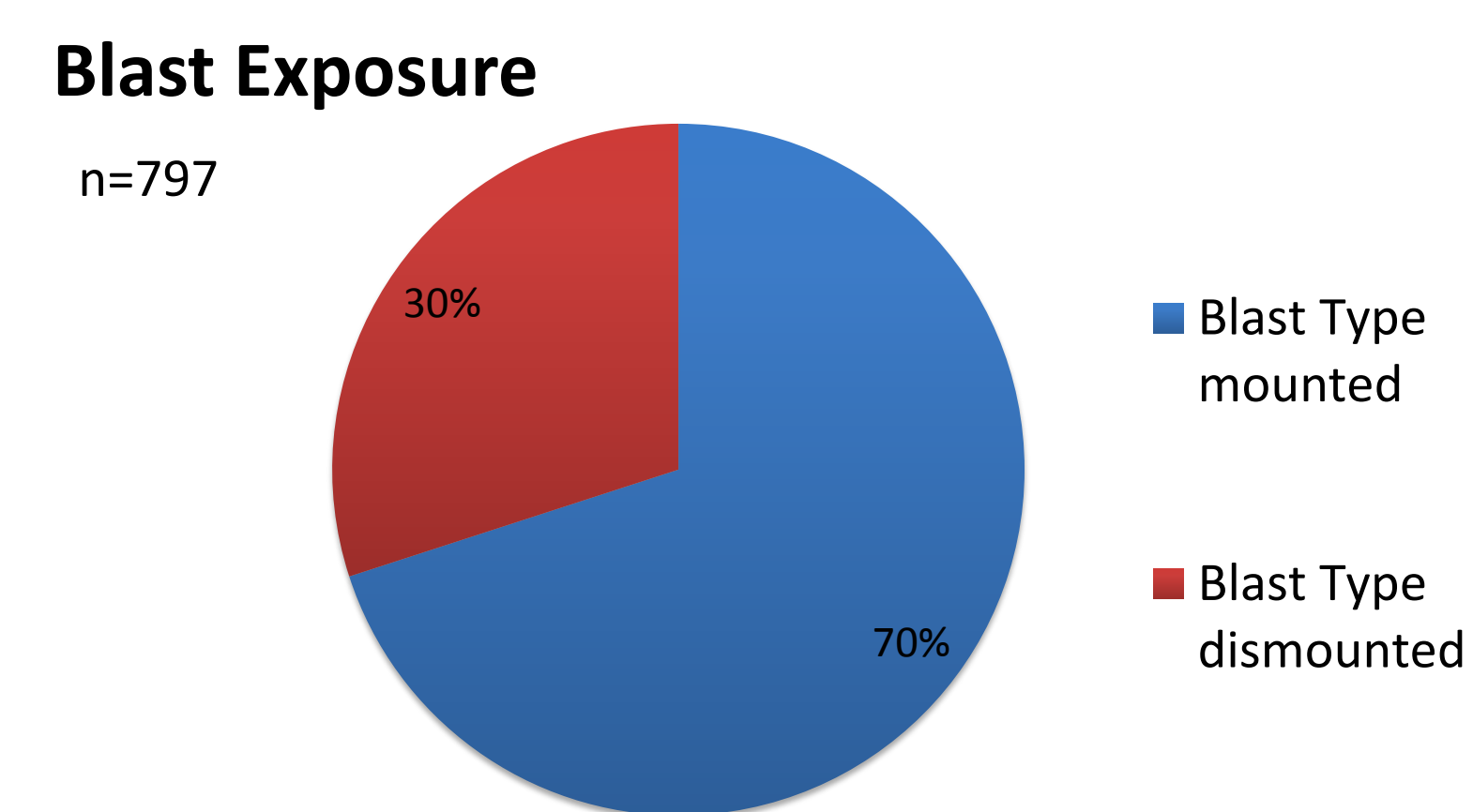
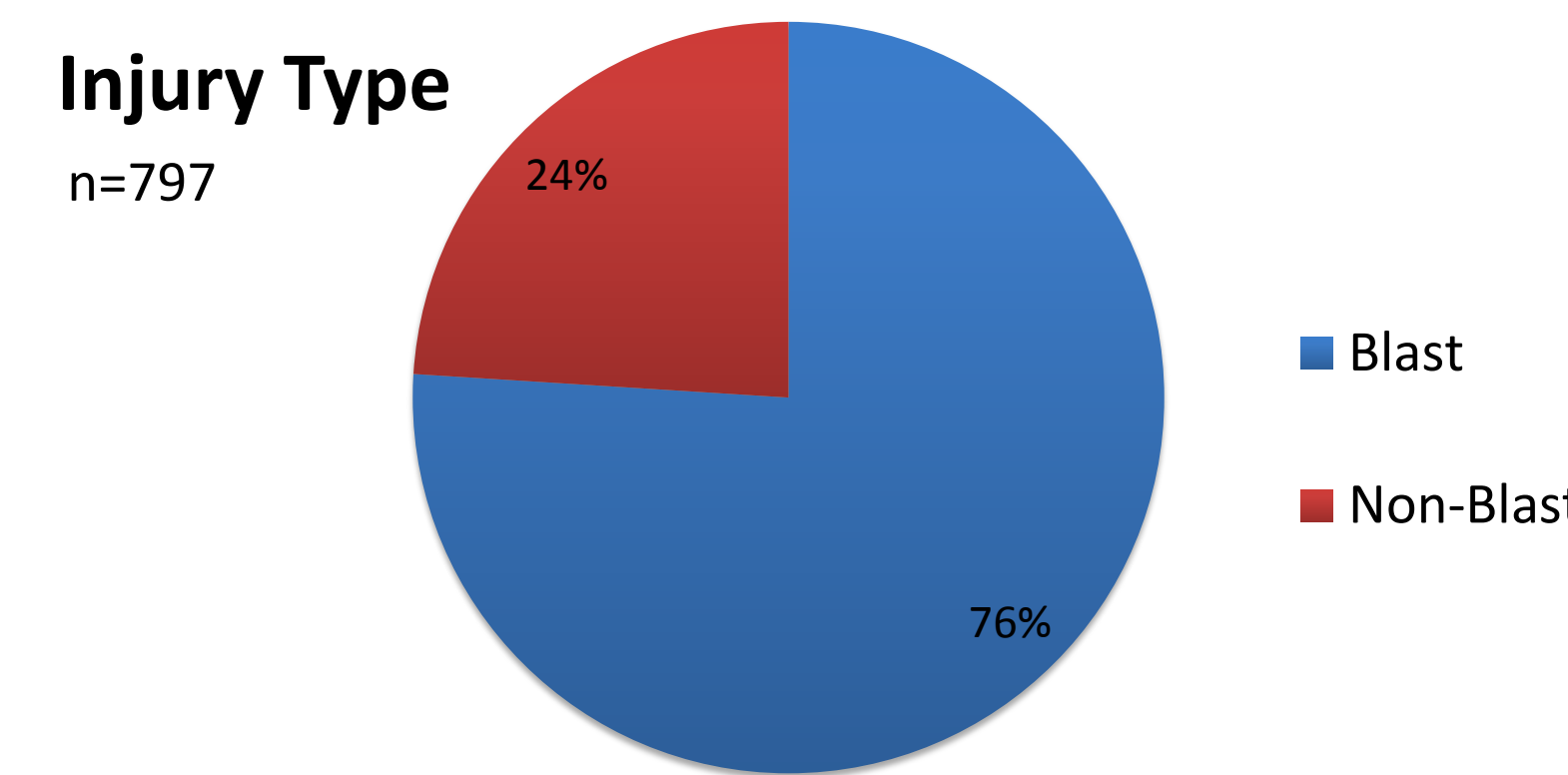
## Symptoms



## SUMMARY

- Demographics of present sample matched Marine Corps demographics from Camp Lejeune
- ASVAB scores were at 61 percentile
- Sleep disorders, headaches and loss of consciousness were frequently reported
- The majority of TBIs were from mounted blasts and occurred only once
- Processing speed is diminished
- Learning and memory is affected
- MMPI scores suggested numerous scale elevations
- An example of interfacing a professional practice with university training site

## Injury Profile



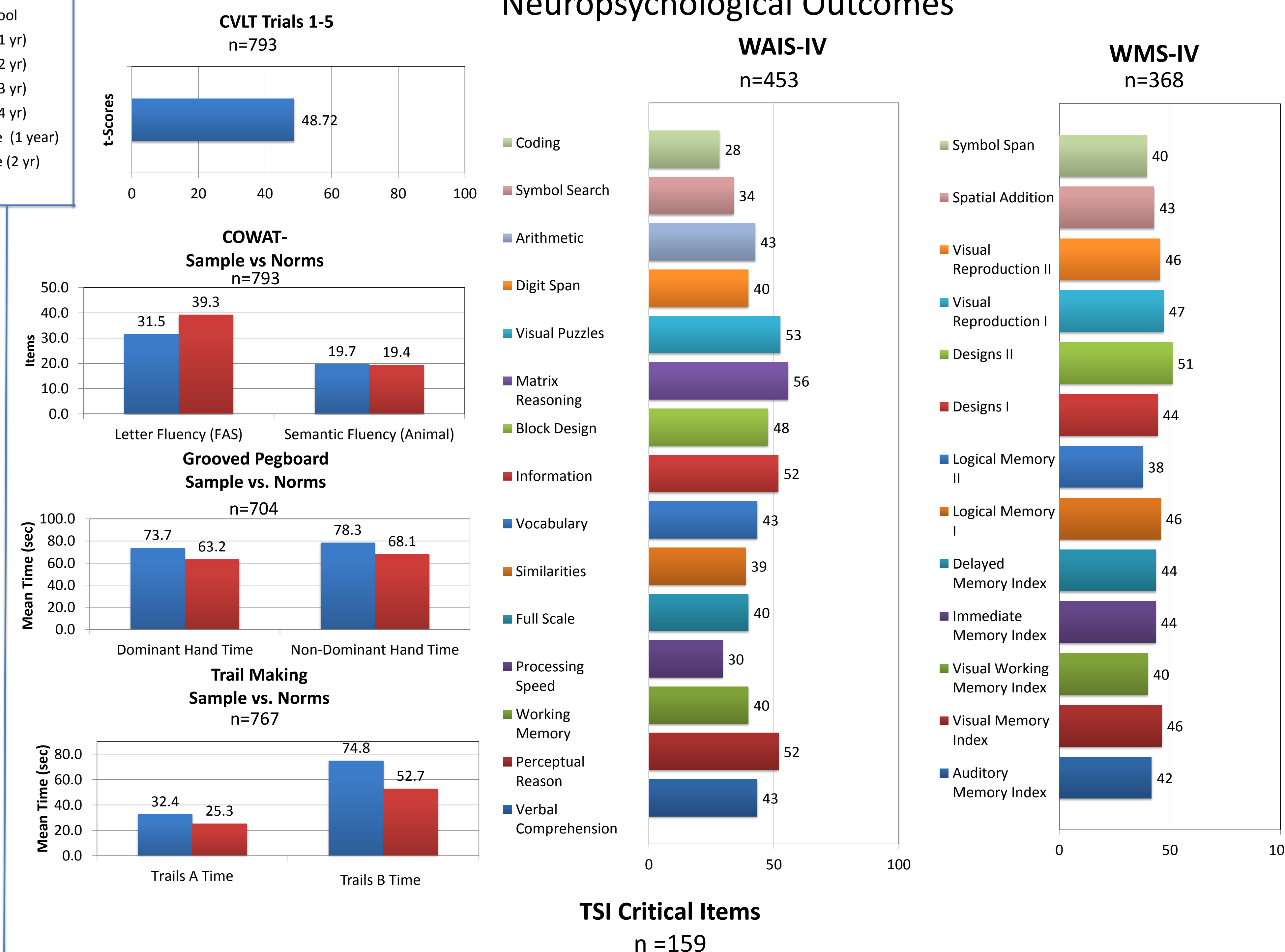
## Sample's ASVAB Scores

n=308

Mean	61.5
Standard Deviation	18.8

AFQT is a Percentile Score. Calculated via Department of Defense testing.

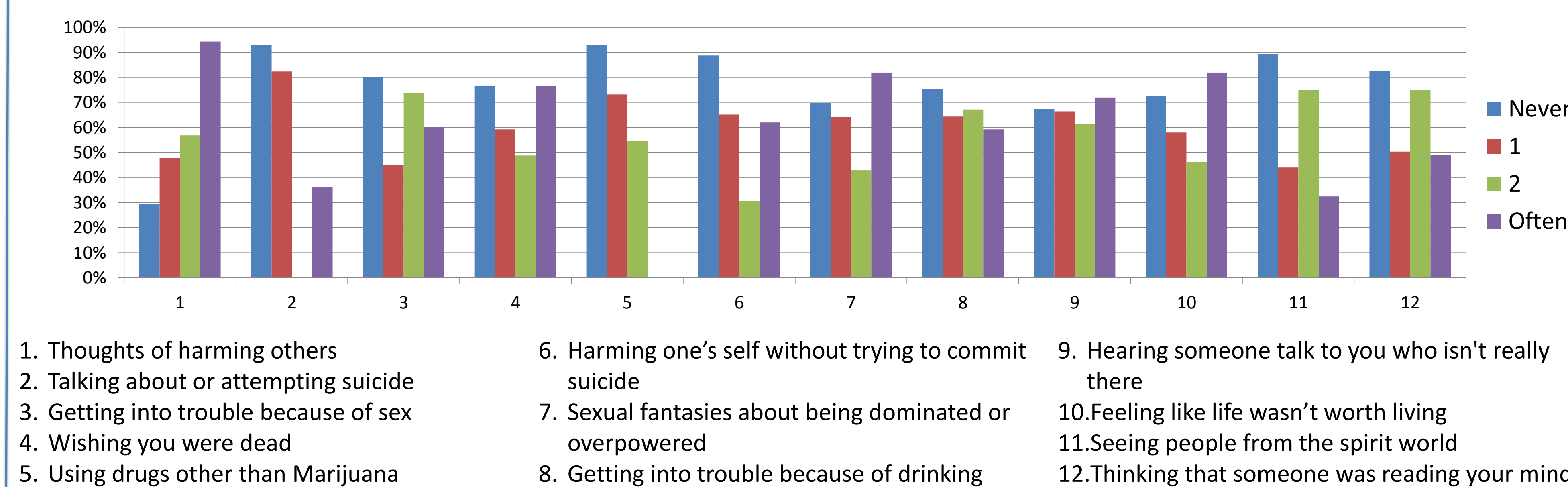
## Neuropsychological Outcomes



## FUTURE DIRECTIONS

Several concerns are being investigated including;

- Using the Traumatic Symptom Inventory to assess impact of traumatic experience and PTSD
- Relationship of premorbid function to neuropsychological deficits.
- Difference between mounted vs. non-mounted injuries.
- Effects of single vs. multiple blasts
- Long term effects of n=120 repeat testing on individuals (one year later)
- Validity of the TSI in the military population.



References  
Strauss, E., Sherman, E., & Spreen, O. (2006). *A compendium of neuropsychological tests*. (3rd ed.). Oxford University Press.

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