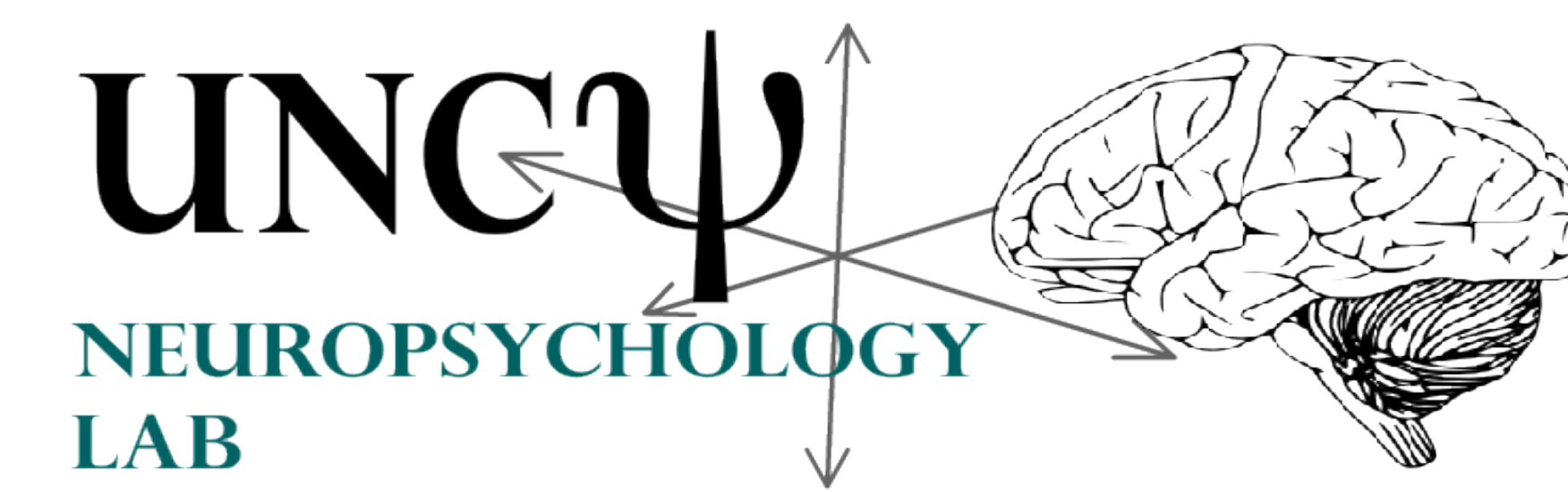




Neuropsychological Description of Blast Injuries: The Camp Lejeune Blast Data Set.

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INTRODUCTION

With the duration of combat operations that have been ongoing in Iraq and Afghanistan, the IEDs used and technological safety advances the amounts of wounded soldiers have increased. The amount of wounded soldiers increased due to medical techniques, advance in body armor and speed of first aid. Many injuries involve blasts and concurrent brain injury from exposure that can have effects on their cognitive functioning.

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;

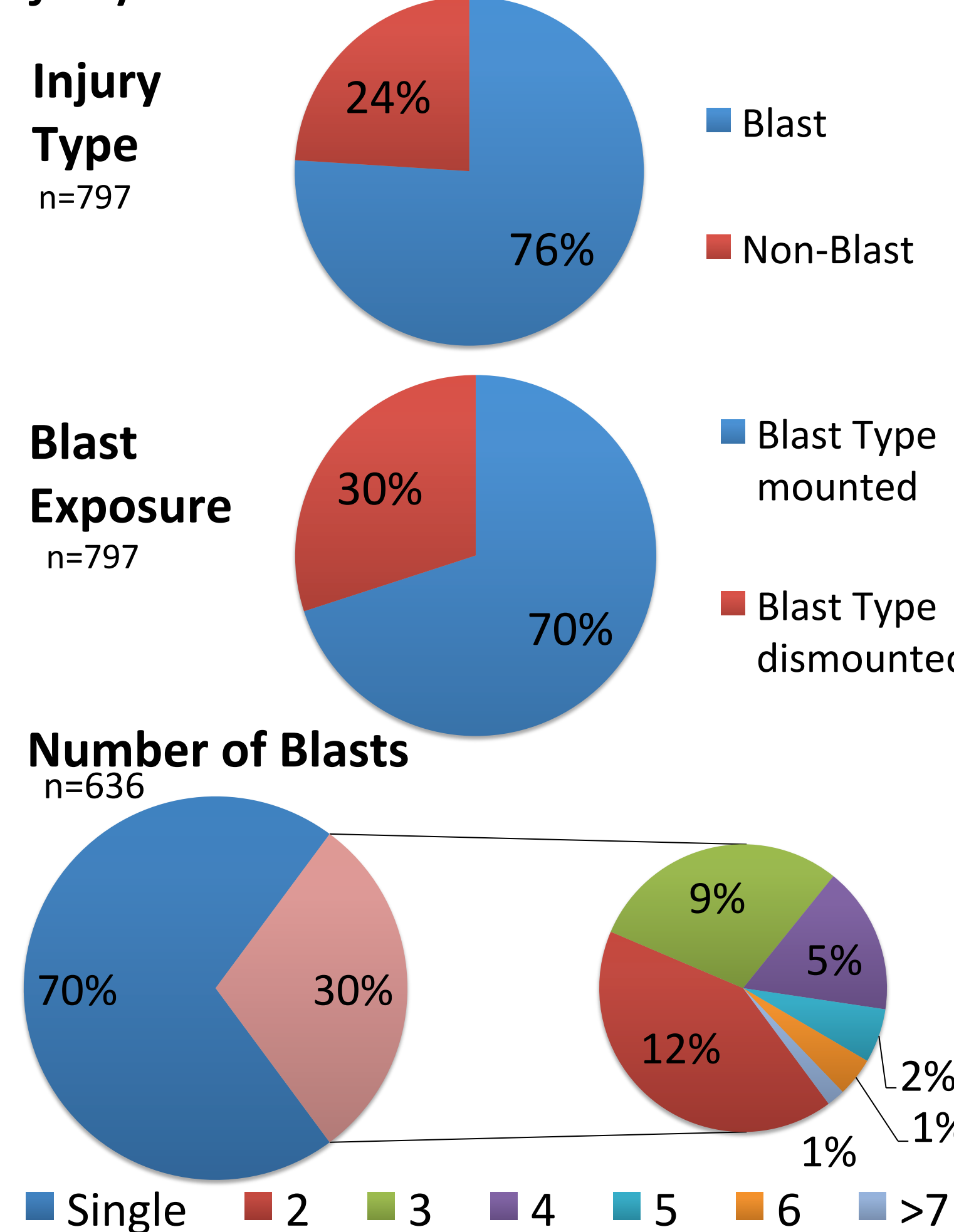
- Basic demographics
- Symptoms
- Blast profile
- ASVAB scores (premorbid)

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.

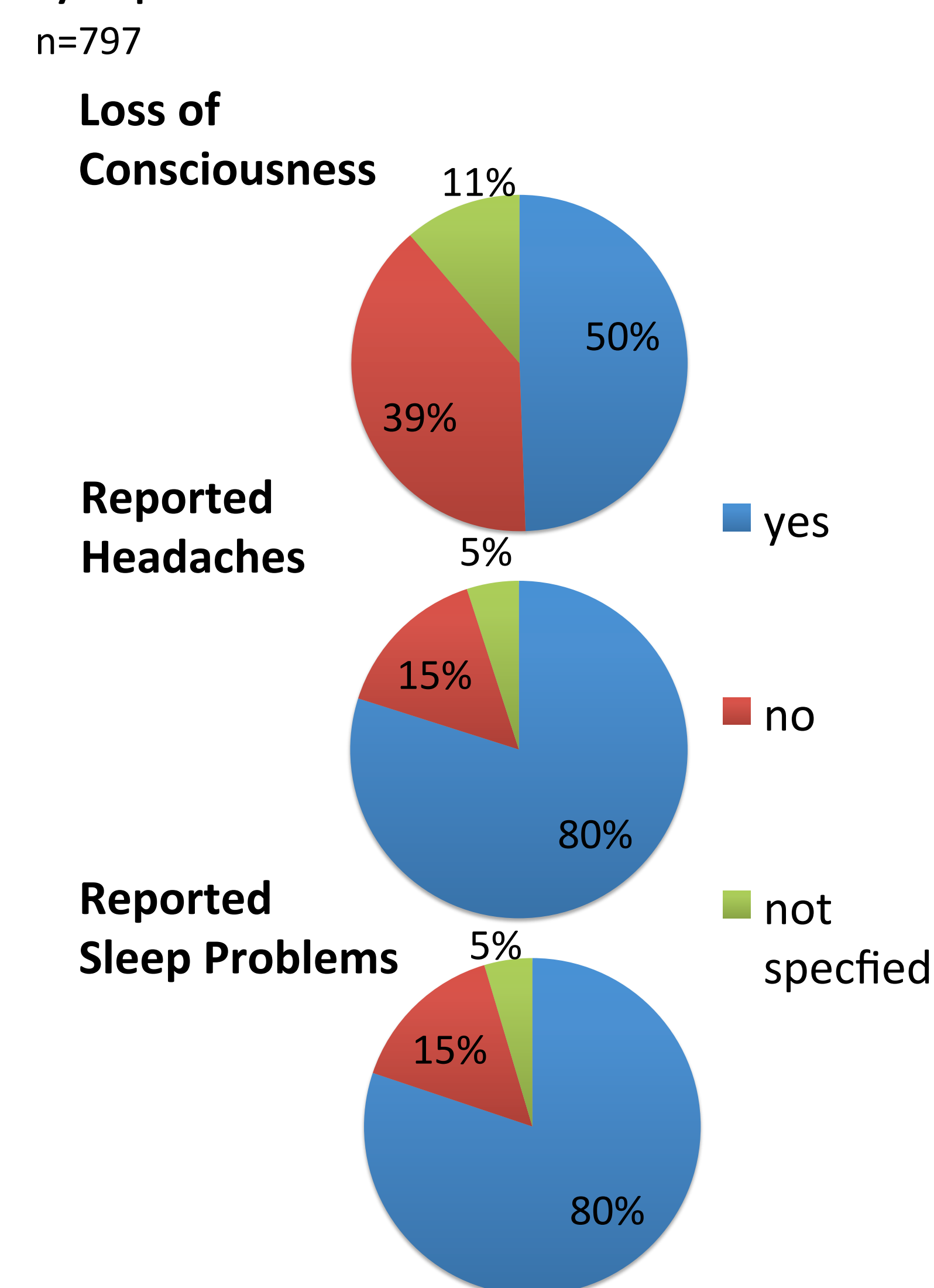
Sample Demographics

n=767			ASVAB: AFQT Scores n=308	
Age	Mean: 25	SD: 4.9	Mean: 61.5	
Gender	Males: 99%	Females: 1%	SD: 18.8	
Handedness	Right: 89%	Left: 10%		
Ethnicity			Years of education	
Caucasian:	87%	12 Years:	75%	
Hispanic:	6%	13 years:	11%	
African American:	5%	14 years:	8%	
Other:	2%	15 years:	2%	
		16 years:	3%	

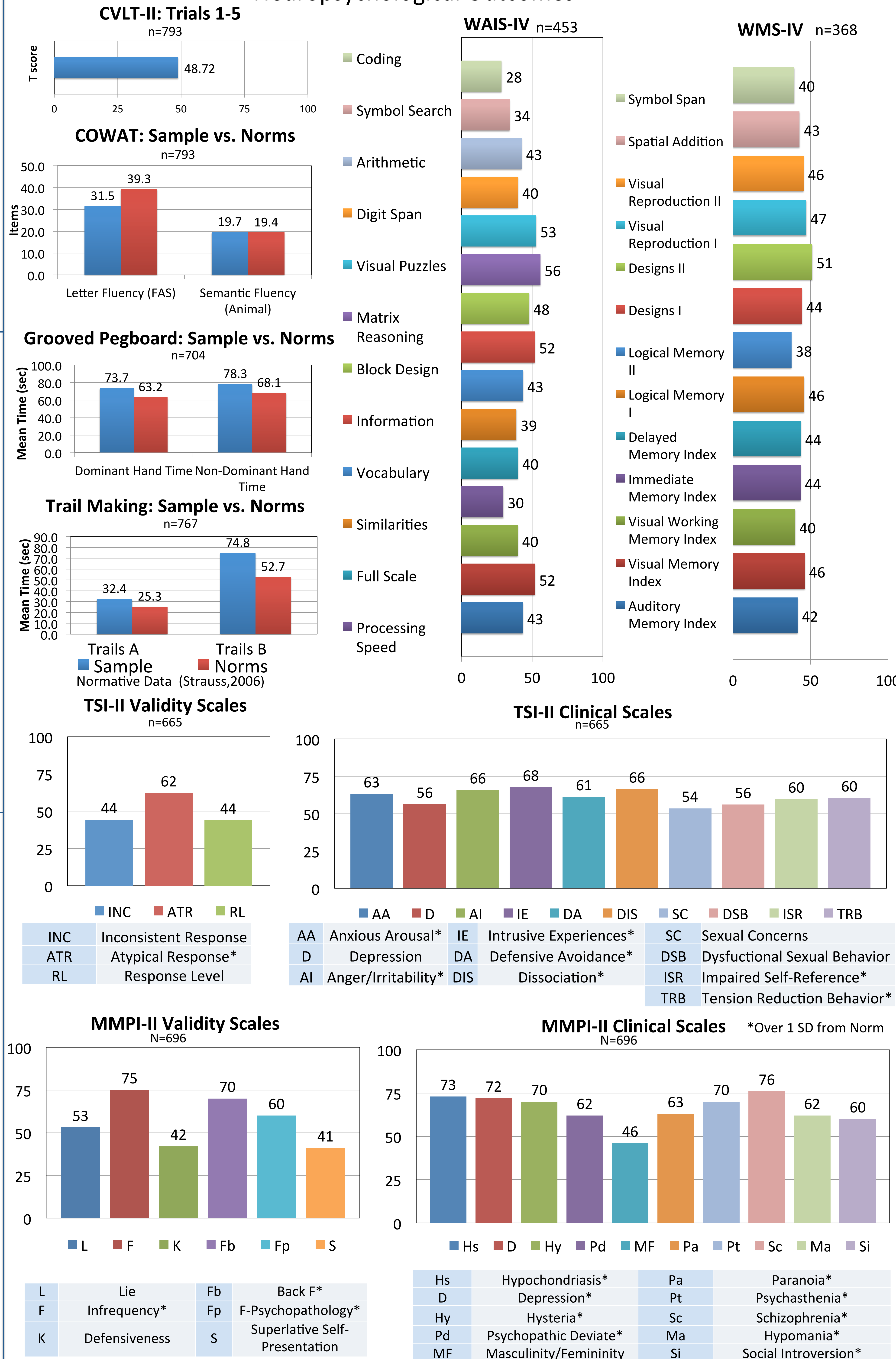
Injury Profile



Symptoms



Neuropsychological Outcomes



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
- TSI scores showed several elevated scales
- An example of interfacing a professional practice with university training site

FUTURE DIRECTIONS

Several concerns are being investigated including;

- Relationship of premorbid function to neuropsychological deficits
- Difference between mounted vs. non-mounted injuries.
- Effects of single vs. multiple blasts
- Effects of loss of consciousness on PTSD
- Neuropsychological performance recovery after one year(n=120)
- 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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