Subjective Cognitive Complaints and Neuropsychological Performance in Suicide Attempters with PTSD

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Introduction

- Post-Traumatic Stress Disorder (PTSD) is a common psychiatric disorder, with a lifetime prevalence ranging from 8% - 9% in the general population (Panagioti et al., 2009).
- PTSD carries substantial risk for suicidal behavior.
- Subjective cognitive complaints have been found to be elevated among PTSD patients at risk for suicidal behavior, compared to those with PTSD but no suicidal behavior history (Cations et al., 2023), and may represent a clinical risk factor for suicidal behavior in this population.
- It is unclear if these subjective cognitive complaints are related to actual neurocognitive deficits, and/or are a reflection of other aspects of PTSD suicide attempters' psychopathology.
- We examined samples of depressed, unmedicated PTSD patients with and without past suicide attempt to determine (a) if subjective cognitive complaints were, in fact, elevated in those who had made past suicide attempts, (b) if objective neurocognitive dysfunction accompanied these complaints, and (c) either these subjective complaints or these objective neuropsychological deficits could be explained by other psychopathological factors.

Methods

- Participants were 74 adults in a major depressive episode (MDE) with lifetime comorbid PTSD recruited by advertisement and by referral from clinicians.
- All participants were unmedicated at the time of assessment as part of their participation in associated clinical and biological assessments.
- PTSD participants included those with at least one past suicide attempt (n=38) and those without past suicidal behavior (n=36).
- Participants received an extensive clinical history, structured diagnostic assessment (SCID-I and SCID-II), clinical ratings, and Neuropsychological assessment.
- Clinical ratings included assessments of depression severity, hopelessness, global functioning, suicidal ideation, and subjective cognitive complaints (Cognitive Failures Questionnaire).
- Neuropsychological battery included measures of reaction time (computerized Choice RT), processing speed (WAIS-IV Coding), attention (computerized CPT), cognitive control (computerized Stroop), memory (Buschke SRT), working memory (computerized A, Not B), abstraction (Wisconsin Card Sort), language fluency (Letter and Category), and impulse control (computerized Go-No Go).
- PTSD attempters and nonattempters were compared via both uncorrected univariate statistics and covariate-adjusted analyses of variance.

Conflict of Interest (COI)

- Dr. Keilp and spouse own stock in Pfizer and Zoetis but report no conflict with material in this presentation. Drs. Mann and Burke receive royalties from the Columbia Suicide Severity Rating Scale, which was not used in this analysis. Other authors report no conflict of interest with material presented here.

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Table 1

	PTSD Attempters	PTSD Nonattempters	
N	38	36	
	Mean (SD)	Mean (SD)	p-value
Age (years)	35.9 (10.7)	38.5 (9.7)	0.271
Education (years)	15.2 (2.8)	15.7 (2.3)	0.364
WAIS-III Vocabulary	12.6 (2.7)	13.0 (3.1)	0.512
HDRS	28.1 (8.8)	25.1 (6.4)	0.095
BDI	32.6 (10.6)	22.4 (9.4)	<.001*
GAS	44.6 (10.6)	53.4 (10.6)	<.001*
BIS-11	71.2 (11.0)	70.4 (10.9)	0.772
BDHI	39.8 (11.1)	31.9 (10.4)	0.007*
BGAH	20.8 (5.7)	18.1 (4.8)	0.033*
CFQ	57.3 (19.6)	48.3 (15.5)	0.051(*)
	% (N)	% (N)	
Sex (females)	84.2 (32)	75.0 (27)	0.325
Physical/Sexual Abuse Hx	81.6 (31)	80.0 (28)	0.864
Race			0.464
Asian	2.7 (1)	5.6 (2)	
Black/African American	16.2 (6)	5.6 (2)	
White	73.0 (27)	80.6 (29)	
More than one race	8.1 (3)	5.6 (2)	
Unknown/Not reported	0.0 (0)	2.8 (1)	
Ethnicity			0.963
Hispanic	13.5 (5)	13.9 (5)	
Not Hispanic	86.5 (32)	86.1 (31)	
Psychopathology			
PTSD (current)	73.7 (28)	66.7 (24)	0.509
Bipolar Disorder	44.7 (17)	25.0 (9)	0.075
BPD	39.5 (15)	11.8 (4)	.008*
Past Substance Abuse	42.1 (16)	30.6 (11)	0.302

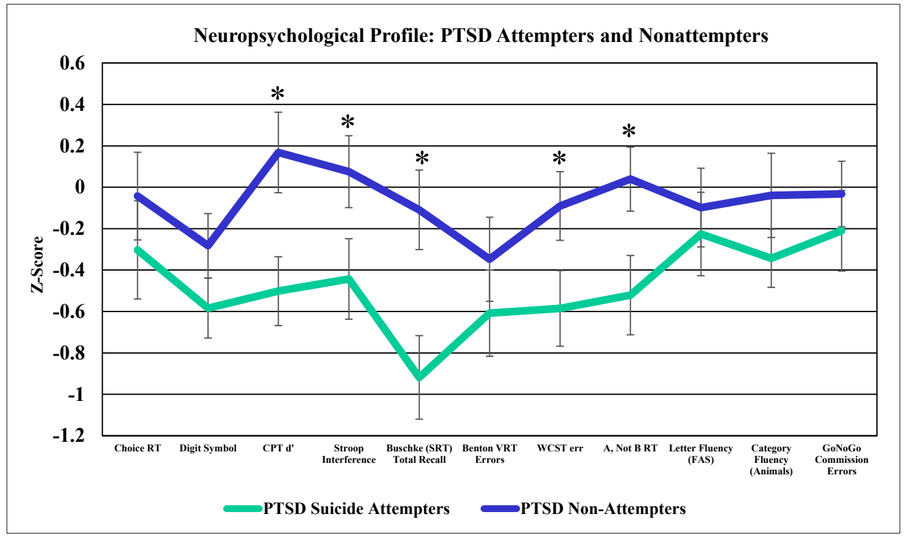
Abbreviations in the table refer to the following:

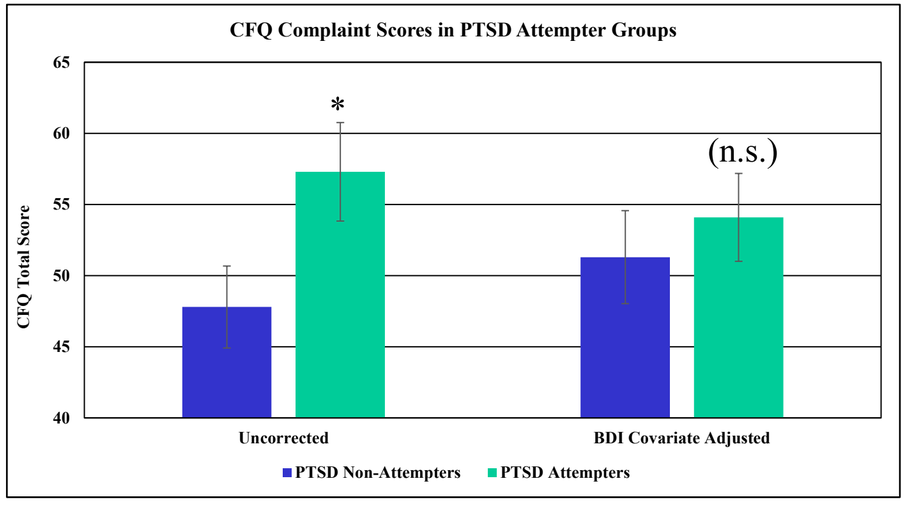
- Hamilton Depression Rating Scale (HDRS), Beck Depression Inventory (BDI), Global Assessment Scale (GAS), Barratt Impulsiveness Scale (BIS-11), Buss-Durkee Hostility Inventory (BDHI), Brown-Goodwin Aggression History (BGAH), Cognitive Failures Questionnaire (CFQ)

Results

- Suicide attempter and nonattempter groups were comparable in age, sex distribution, race, ethnicity, education, and estimated ability level. Approximately three-quarters of each group were female, and 80.0% or more of each had experienced past physical and/or sexual abuse.
- PTSD participants with past suicidal attempts were, as expected, found to have greater a level of subjective cognitive complaint (p = .051). Though PTSD attempters and non-attempters had comparable depression severity as rated on an objective clinician-rated measure (Hamilton Depression Scale, p = .10), PTSD attempters exhibited a higher degree of subjective depression (Beck Depression Inventory, p < .001), greater hopelessness (Beck Depression Inventory, p = .004), and poorer overall level of functioning (Global Assessment Scale, p < .001).
- On neuropsychological tasks, PTSD attempters exhibited poorer sustained attention (Continuous Performance Test, p = .011), attention control (computerized Stroop task, p = .051), verbal memory (Buschke Selective Reminding Test, p = .005), abstraction (Wisconsin Card Sort, p = .051), and reasoning speed (A, Not B Time Reasoning task, p = .027).
- When severity of subjective depression was controlled, however, differences in their level of subjective cognitive complaint was no longer significant (p = .554). Poorer neuropsychological performance on measures of sustained attention (Continuous Performance Test, p = .044) and abstraction (Wisconsin Card Sort, p = .055), however, remained significant.

Neuropsychological Results





Conclusions

- Results confirm that subjective cognitive complaints are elevated in PTSD patients with past suicidal behavior, but these complaints may simply reflect a heightened level of subjective depression severity, which is also known to be associated with increased suicidal behavior risk.
- Objective neuropsychological deficits were also found in PTSD suicide attempters, and evident even after controlling for subjective depression severity.
- In assessing suicidal behavior risk in those with PTSD, then, assessments of cognitive complaints, subjective depression severity, and objective neuropsychological performance may be useful for identifying those at greatest risk for self-harm behaviors.