



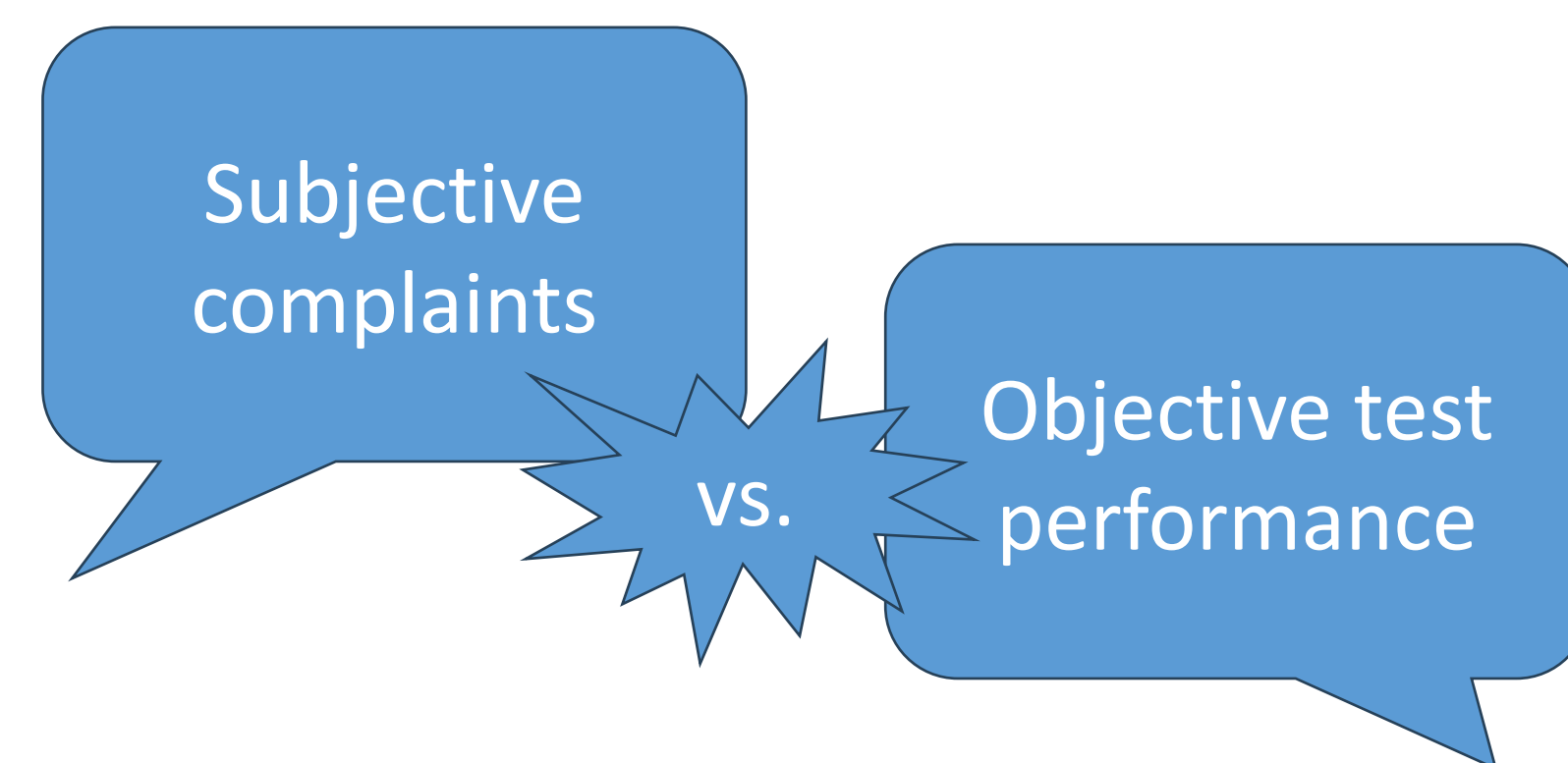
# Standardized Assessment of Subjective Complaints using the Current Complaints Checklist (CCC)



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## Introduction

Inquiry about patients' subjective cognitive complaints is a routine part of the NP interview, but it has not lent itself well to standardization or multisite data aggregation. Thus, little is known about its relationship with cognitive test performance and diagnostic outcomes.



- **Aim 1:** Can we standardize and feasibly aggregate data about patient's subjective cognitive complaints?
- **Aim 2:** How do subjective complaints relate to other aspects of the neuropsychological exam and to clinical decision-making?

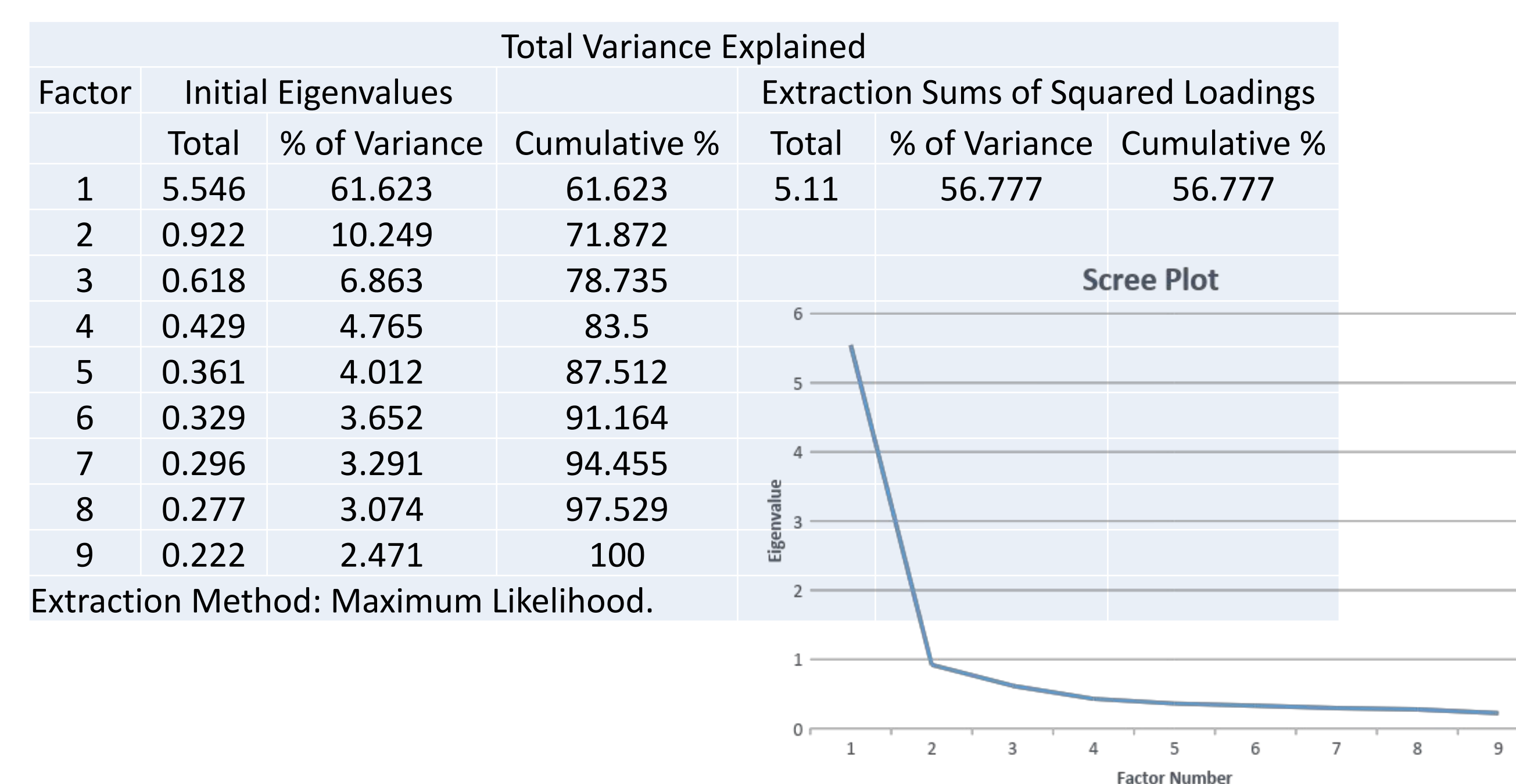
## Current Complaints Checklist

CONCENTRATION AND AWARENESS	MEMORY	PROBLEM SOLVING
<input type="checkbox"/> Highly distractible	<input type="checkbox"/> Forgetting where I leave things (e.g., keys, gloves, etc.)	<input type="checkbox"/> Difficulty figuring out how to do new things
<input type="checkbox"/> Lose my train of thought easily	<input type="checkbox"/> Forgetting names	<input type="checkbox"/> Difficulty planning ahead
<input type="checkbox"/> Become easily confused and disoriented	<input type="checkbox"/> Forgetting what I should be doing	<input type="checkbox"/> Difficulty figuring out problems that most other people can do
<input type="checkbox"/> Blackout spells (fainting)	<input type="checkbox"/> Forgetting where I am or where I am going	<input type="checkbox"/> Difficulty thinking as quickly as needed
<input type="checkbox"/> My mind goes blank	<input type="checkbox"/> Forgetting events that happened quite recently	<input type="checkbox"/> Difficulty doing things in the right order (sequence problems)
<input type="checkbox"/> Aura (strange feelings)	<input type="checkbox"/> Need someone to give me a hint so I can remember things	<input type="checkbox"/> Difficulty verbally describing steps involved in doing something
<input type="checkbox"/> Don't feel very alert or aware of things	<input type="checkbox"/> Relying more and more on notes to remember how to do things	<input type="checkbox"/> Difficulty changing a plan or activity in a reasonable amount of time
<input type="checkbox"/> Altered sense of familiarity (dejas vu)	<input type="checkbox"/> Forgetting how to do things, but I can remember facts	<input type="checkbox"/> Difficulty completing an activity in a reasonable amount of time
<input type="checkbox"/> Other concentration or awareness problems	<input type="checkbox"/> Forgetting faces of people I know (when they are not present)	<input type="checkbox"/> Difficulty doing more than one thing at a time
<input type="checkbox"/> None of the above	<input type="checkbox"/> Frequently forgetting appointments	<input type="checkbox"/> Difficulty switching from one activity to another activity
	<input type="checkbox"/> Other memory problems	<input type="checkbox"/> Easily frustrated
	<input type="checkbox"/> None of the above	<input type="checkbox"/> Other problem solving difficulties
		<input type="checkbox"/> None of the above
SPEECH, LANGUAGE, AND MATH SKILLS	NONVERBAL SKILLS	PHYSICAL
<input type="checkbox"/> Difficulty finding the right word to say	<input type="checkbox"/> Problem drawing or copying	<input type="checkbox"/> Headaches
<input type="checkbox"/> Difficulty understanding what others are saying	<input type="checkbox"/> Difficulty recognizing objects or people	<input type="checkbox"/> Dizziness
<input type="checkbox"/> Unable to speak	<input type="checkbox"/> Difficulty telling right from left	<input type="checkbox"/> Nausea or vomiting
<input type="checkbox"/> Difficulty staying with one idea	<input type="checkbox"/> Difficulty doing things I should automatically be able to do	<input type="checkbox"/> Urinary incontinence
<input type="checkbox"/> Difficulty writing letters or words (not due to motor problems)	<input type="checkbox"/> Difficulty dressing (not due to physical difficulty)	<input type="checkbox"/> Loss of bowel control
<input type="checkbox"/> Slurred speech	<input type="checkbox"/> Problems finding my way around places I've been to before	<input type="checkbox"/> Excessive tiredness
<input type="checkbox"/> Odd or unusual speech sound	<input type="checkbox"/> Parts of my body do not seem as if they belong to me	<input type="checkbox"/> Sensitivity to bright lights
<input type="checkbox"/> Difficulty with math (e.g., checkbook balancing, etc.)	<input type="checkbox"/> Unaware of time (e.g., time of day, season, year)	<input type="checkbox"/> Sensitivity to loud noises
<input type="checkbox"/> Difficulty understanding what I read	<input type="checkbox"/> Slowed reaction time	<input type="checkbox"/> Difficulty falling asleep
<input type="checkbox"/> Difficulty speaking	<input type="checkbox"/> Other nonverbal problems	<input type="checkbox"/> Difficulty staying asleep
<input type="checkbox"/> Other speech, language, or math problems	<input type="checkbox"/> None of the above	<input type="checkbox"/> Other physical problems
<input type="checkbox"/> None of the above		<input type="checkbox"/> None of the above
BEHAVIOR/MOOD	SENSORY	MOTOR AND COORDINATION
<input type="checkbox"/> Become angry more easily	<input type="checkbox"/> Loss of feeling or numbness	<input type="checkbox"/> Fine motor control problems (e.g., using a pencil, key, etc.)
<input type="checkbox"/> Euphoria (feeling on top of the world)	<input type="checkbox"/> Tingling or strange skin sensations	<input type="checkbox"/> Weakness on one side of my body
<input type="checkbox"/> Much more emotional (e.g., cry more easily)	<input type="checkbox"/> Difficulty telling hot from cold	<input type="checkbox"/> Difficulty holding onto things
<input type="checkbox"/> Feel as if I just don't care anymore	<input type="checkbox"/> Problems seeing on one side	<input type="checkbox"/> Tremor or shakiness
<input type="checkbox"/> Doing things automatically (without awareness)	<input type="checkbox"/> Blurred vision	<input type="checkbox"/> Muscle tick or strange movements
<input type="checkbox"/> Less inhibited (to do things I would not do before)	<input type="checkbox"/> Blank spots in vision	<input type="checkbox"/> My writing is very small
<input type="checkbox"/> Difficulty being spontaneous	<input type="checkbox"/> Brief periods of blindness	<input type="checkbox"/> My writing is very large
<input type="checkbox"/> Change in eating habits	<input type="checkbox"/> See "stars" or flashes of light	<input type="checkbox"/> Walking more slowly than other people
<input type="checkbox"/> Change in interest in sex	<input type="checkbox"/> Double vision	<input type="checkbox"/> Feeling stiff
<input type="checkbox"/> Loss of energy	<input type="checkbox"/> Things look larger or smaller than they are	<input type="checkbox"/> Balance problems
<input type="checkbox"/> Increase in energy	<input type="checkbox"/> Difficulty looking quickly from one object to another object	<input type="checkbox"/> Difficulty starting to move
<input type="checkbox"/> Experiencing nightmares on a daily/weekly basis	<input type="checkbox"/> Need to squint or move closer to see clearly	<input type="checkbox"/> Jerky muscles
<input type="checkbox"/> Loss of sexual desire	<input type="checkbox"/> Losing hearing	<input type="checkbox"/> Muscles tire quickly
<input type="checkbox"/> Increase in weight	<input type="checkbox"/> Ringing in my ears or hearing strange sounds	<input type="checkbox"/> Often bumping into things
<input type="checkbox"/> Loss of weight	<input type="checkbox"/> Difficulty tasting food	<input type="checkbox"/> Other motor or coordination problems
<input type="checkbox"/> Lack of interest in pleasurable activities	<input type="checkbox"/> Difficulty smelling	<input type="checkbox"/> None of the above
<input type="checkbox"/> Increase in irritability	<input type="checkbox"/> Smelling strange odors	
<input type="checkbox"/> Increase in aggression	<input type="checkbox"/> Other sensory problems	
<input type="checkbox"/> Other recent changes in behavior or personality	<input type="checkbox"/> None of the above	
<input type="checkbox"/> None of the above		

## Factor Analysis (EFA)

N = 1,077 patients undergoing routine NP exam

1-factor solution, loadings ranged from .632-.832.

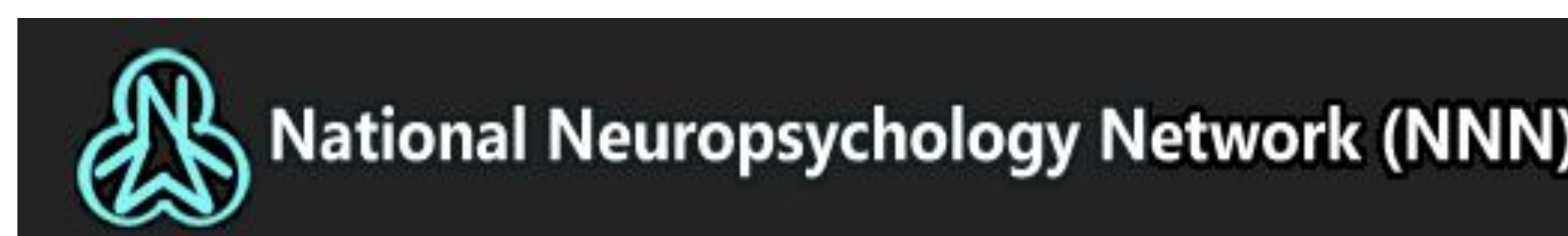


## Descriptive Findings

Current complaints were negatively associated with age ( $r = -.14$ , 95%CI [-0.20,-0.08]) and education ( $r = -.17$ , 95%CI [-.23,-.12]).

Higher number of endorsed complaints showed high positive correlations with self-reported anxiety ( $r = .48$ , 95%CI [.26,.66]), depression ( $r = .47$ , 95%CI [.27,.63]), anger ( $r = .33$ , 95%CI [.23,.42]), somatic symptoms ( $r = .43$ , 95%CI [.34-.52]), and, most notably, functional impairment on WHODAS2.0 ( $r = .66$ , 95%CI [.22, .77]).

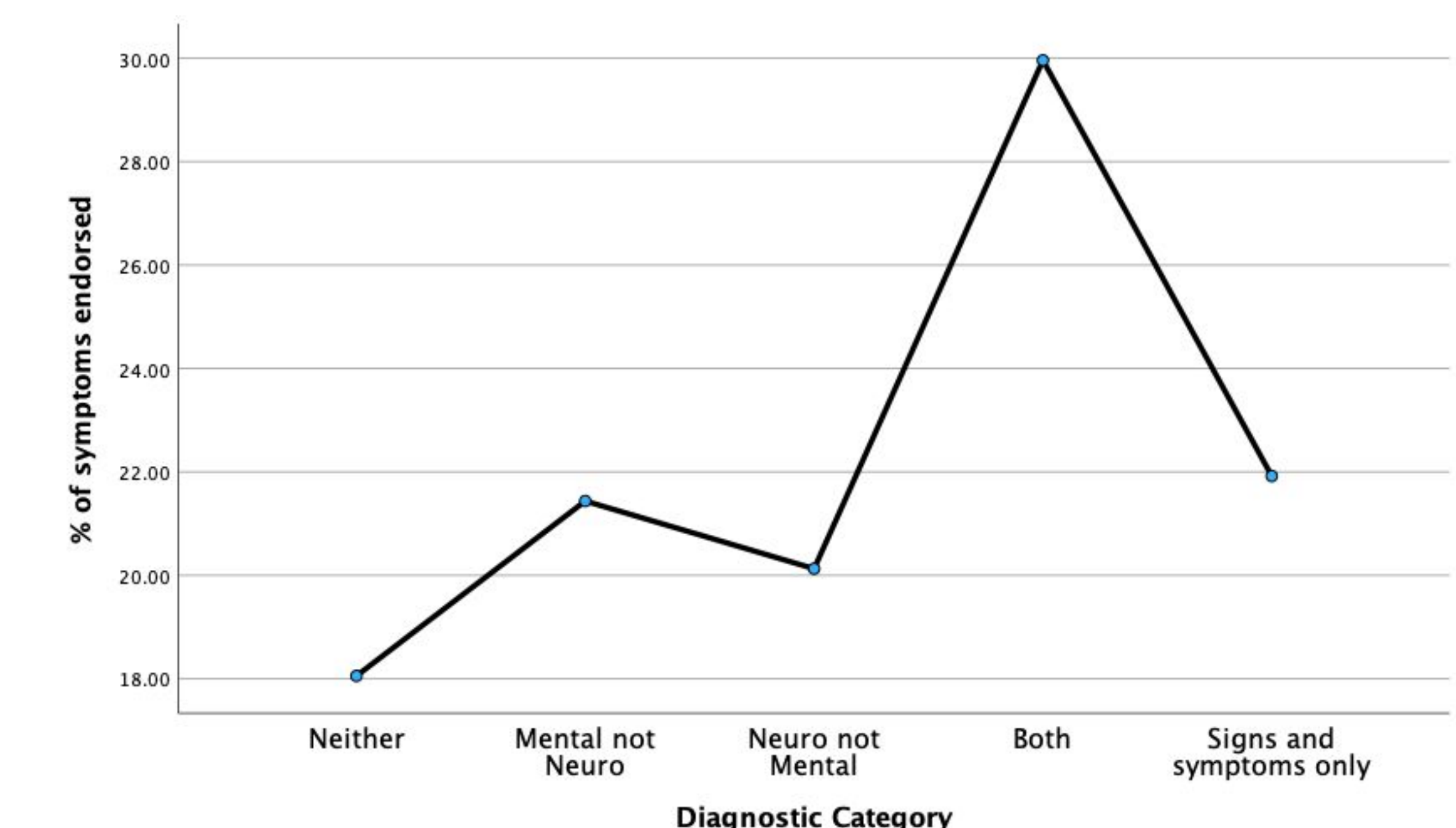
Correlations with cognitive test performance were remarkably lower, albeit some still statistically significant due to large N ( $r_{PSI} = -.26^{**}$ ,  $r_{VCI} = -.21^{**}$ ,  $r_{WMI} = -.14^*$ ,  $r_{PRI} = -.09^{ns}$ ,  $r_{FSIQ} = -.19^{ns}$ ).



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## Diagnostic Group Differences

Patients with both mental and neurological diagnoses endorsed more symptoms (34.75%) than those with only mental, neurological, neither, or unspecified signs and symptoms (Mean differences ranging from 8.04 – 11.90% higher symptom endorsement).



Patients with diagnosed memory impairment did not show statistically different patterns of symptom endorsement, compared to those without memory impairment (22.65% vs. 20.80%, respectively).

## Conclusions

- Within a diverse clinical sample, the CCC may be applied as a unidimensional scale of subjective complaints.
- “General” complaints are highly correlated with self-reported emotional distress and functional impairment, and to a lesser extent, with cognitive test performance.
- Patients with both neurological and mental health diagnoses may endorse greatest subjective complaints.
- No differences observed among patients with and without diagnosed memory impairment.
- Future work may more precisely determine diagnostic group differences and reveal whether over-/under-reporting constructs within this checklist can be validated with respect to existing symptom validity tests.