Work Readiness Cognitive Screen (WCS) Preliminary Findings
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Background

The Work Readiness Cognitive Screen (WCS) is an Internet-based assessment tool developed for use in populations with known or suspected cognitive dysfunction. The WCS was designed to be brief, technician-administered, and valid regardless of level of computer familiarity.

Participants

HeadMinder collaborated with Federal Employment Guidance Services of NY (FEGS), a multi-site agency offering services to an ethnically and psychiatrically diverse clientele, in order to evaluate the feasibility and utility of WCS assessment in a psychiatric population. FEGS offers 2 different treatment programs, a Continuing Day Treatment Program (CDT) and an Intensive Psychiatric Rehabilitation Program (IPRT). The CDT caters to clients with relatively low levels of functioning, whose goal is stabilization. IPRT's clients are more focused on educational and vocational goals.

About the WCS

The WCS protocol integrates information and test results from multiple domains associated with positive vocational outcomes including:

1) Client self-report questionnaire regarding vocational preferences, work values, and self-confidence in the areas of work, learning, and socializing;
2) Objective neurocognitive subtests of memory, attention, reaction time, and reasoning;
3) Measure of reading, a skill necessary for many vocations and an indicator of premorbid IQ;
4) Vocational, medical, and psychiatric history;
5) Clinician-reported social and personal skills
6) Optional clinician-reported mental status examination, observations, and notes.

An initial study examined reliability of test-retest performances by 38 patients with schizophrenia evaluated 12 weeks apart. For the cognitive factors considered below, the following coefficients were obtained: Attention = .58; Working Memory = .75; Immediate Visual Memory = .63; Delayed Visual Memory = .81; Verbal Recognition Memory = .63; Educational Index = .91.

Populations/Hypotheses

- All patients with schizophrenia or schizoaffective diagnoses were included in hypothesis 1.
- Patients with schizophrenia or schizoaffective disorder diagnoses were grouped according to level of functioning for hypotheses 2 & 3 (CDT = 93; IPRT = 92).
- For hypotheses 4, 29 patients with mood disorder (Bipolar/Depression with psychotic features) were compared to age/education matched patients diagnosed with schizophrenia.

Based on previous research on cognitive functioning in those with schizophrenia spectrum disorders, the following was hypothesized:

1) Overall, participants with schizophrenia would perform approximately 1.33-2.0 standard deviations below average (i.e., SS=80-70).

2) CDT patients were expected to obtain lower scores than IPRT patients on measures of memory and attention.

3) CDT and IPRT patients were not expected to obtain significantly different scores on tests of reaction time, reading level, and motor skills.

4) Mood disorder patients were expected to perform better than thought disorder patients, but lower than the normative group on measures of attention and memory.

Schizophrenia Group Characteristics (Hypotheses 1, 2, & 3)

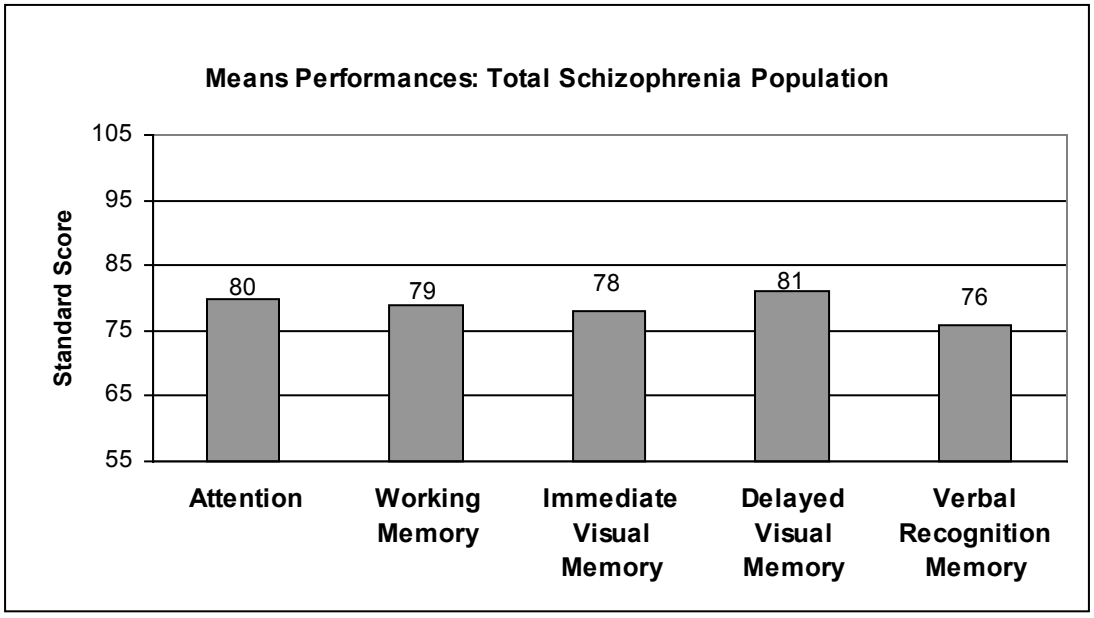
	CDT N = 93 (Low Functioning)	**IPRT N = 92 (High Functioning)**
	N	**N**
Gender		
Female	31	29
Male	62	63
Age Group		
18-29	19	15
30-49	54	66
50-69	20	11
Diagnosis		
Schizophrenia	66	58
Schizoaffective	27	34
Education		
<=12 years	78	68
13-15 years	13	20
>=16 years	2	4
Ethnicity		
African American	53	62
Caucasian	20	9
Hispanic	17	16
Other	3	5

Thought Disorder and Mood Group Characteristics (Hypothesis 4)

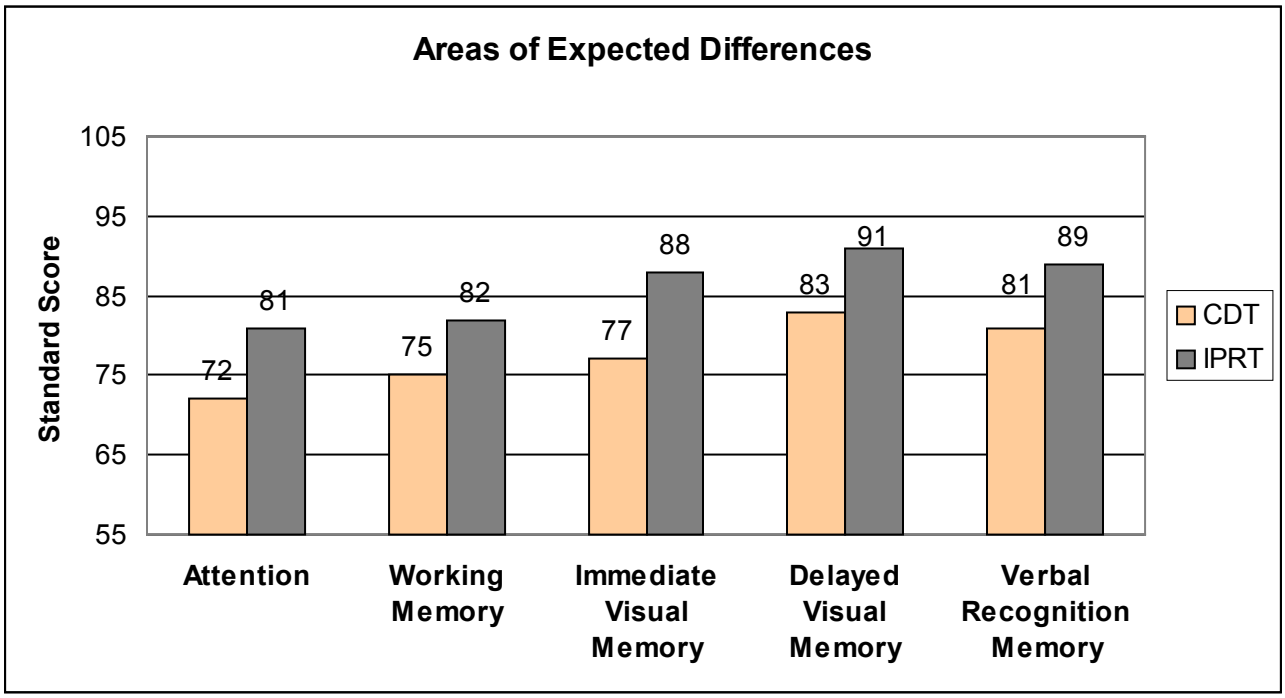
	Thought Disorder N = 29	Mood Disorder N = 29
	N	**N**
Gender		
Female	8	14
Male	21	15
Age Group		
18-29	4	4
30-49	19	19
50-69	6	6
Hx Alcohol/Substance Abuse	3/3	2/1
Education		
<=12 years	18	15
13-15 years	7	6
>=16 years	4	8
Ethnicity		
African American	18	7
Caucasian	5	15
Hispanic	5	2
Other	1	5

WCS Findings

Hypothesis 1

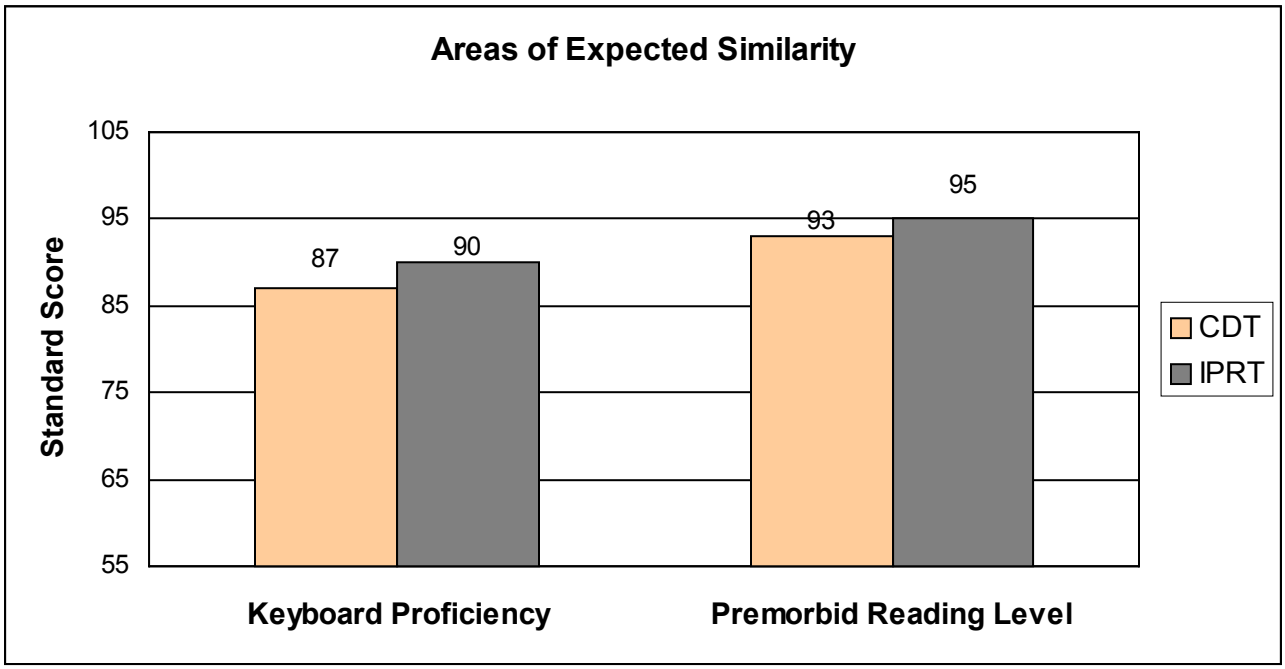


Hypothesis 2



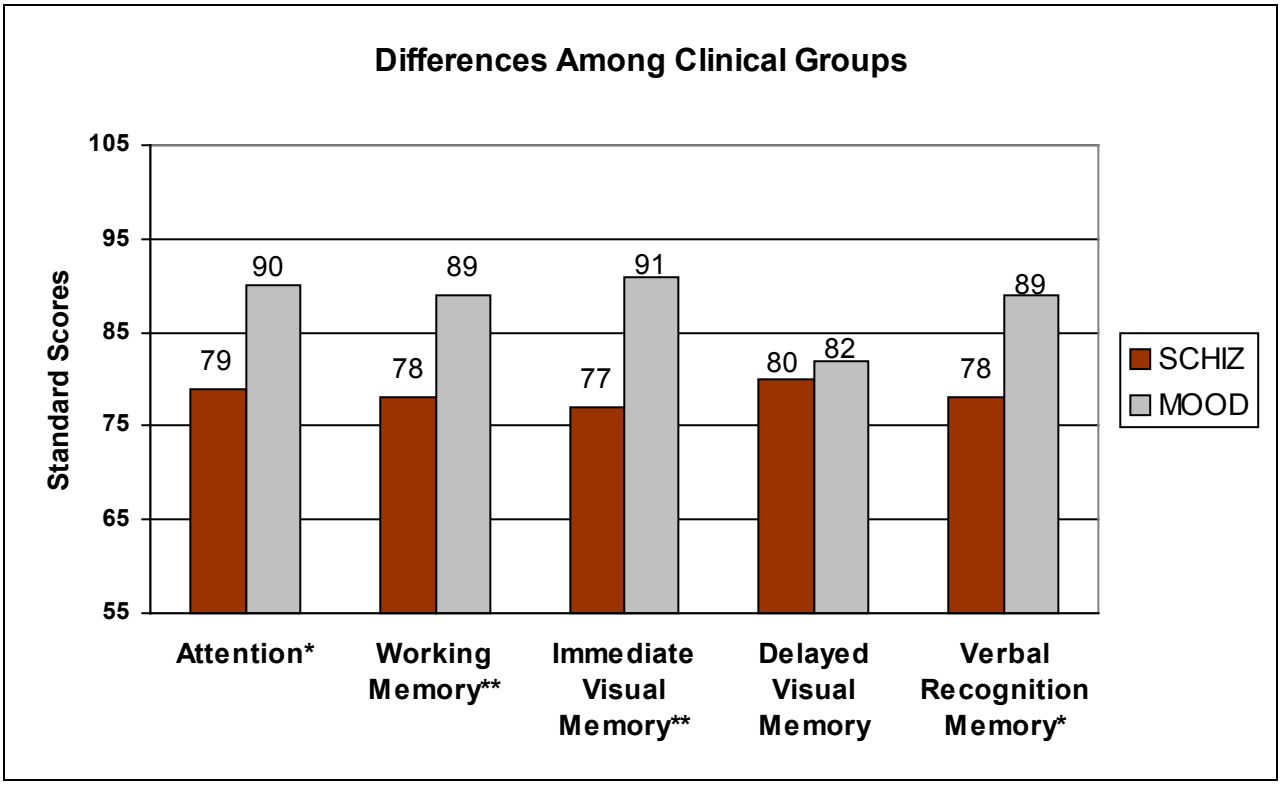
IPRT versus CDT differences in all of the above domains were significant, $p < .01$

Hypothesis 3



No significant differences were found between the IPRT patients and the CDT patients on any of the above domains.

Hypothesis 4



* p<.05 **p<.01

Conclusions

- Mean scores for the FEGS population ranged from *Below Average* to *Mildly Impaired,* with higher functioning patients consistently obtaining higher scores than lower functioning patients on tests associated with level of functioning.
- The WCS proved to be a valid measure of attention/concentration and memory function; it appeared to be sensitive to these deficits in ways similar to traditional face-to-face neuropsychological measures.
- The WCS appears to differentiate between levels of functioning, and may be useful in assisting agencies in placing patients at the appropriate level of care.
- The WCS appeared to be clinically valid in differentiation of thought disorder from mood disorder patients on measures of attention and memory.
- These findings provide preliminary support for the ecological and construct validity of the WCS.

References

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