

Cognitive Assessment – its Importance in the Early Stage of Intervention

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Agenda

Cognitive Abilities & Assessment
Cognitive Deficits of Substance Users
Implications for Intervention



Cognitive Assessment under Project MAC
Tests Administered
Assessment Results



Case Sharing



Discussion

Cognitive Abilities & Assessment

Cognitive Abilities

- General Intelligence
- Attention
- Learning & Memory
- Executive Functioning

Cognitive Assessment

- Administration of evidence-based tests for the formal assessment of cognitive functioning
- Individual results are compared with the norms
- Level of functioning
 - Very Superior; Superior; Above Average, Average; Low Average; Borderline; Impaired

General Intelligence

- Intellectual abilities
 - Verbal intelligence
 - Non-verbal intelligence
- Affected by education, cultural exposure

Examples of Assessment Tools

- HK-WISC, WAIS-III
- TONI –III
- Stanford-Binet 4th Edition

Attention

- Focused Attention
 - Response to external stimuli, grasp the information at once
- Sustained Attention
 - Ability to maintain alertness
- Selective Attention
 - Freedom from distractibility

Attention

- Working Memory
 - Hold and manipulate information in mind
- Alternating Attention
 - Shifting focus of attention
- Divided Attention
 - Respond simultaneously to multiple tasks

Examples of Assessment Tools

- Digit Span
- Digit Cancellation Test
- Stroop Color and Word Test

Learning & Memory

- Registration-rehearsal-long-term memory
- Forgetting – loss of access to the information stored
- Recent vs remote memory

Examples of Assessment Tools

- Chinese Auditory Verbal Learning Test (CVLT)- Chinese Version
- HK List Learning Test (HKLLT)
- Wechsler Memory Test (WMS)
- Rey-osterrieth Complex Figure Test

Executive Functioning

- Initiation & drive : starting a behavior
- Response inhibition : stopping a behavior
- Information processing
- Planning ability
- Generation of alternatives
- Cognitive flexibility

Examples of Assessment Tools

- Stroop Color and Word Test
- Trail Making Tests
- Chinese Category Fluency Test
- Ruff Figural Fluency Test

Cognitive Deficits of Substance Users

Summary

- Results were mixed
- Depends on amount, type, period of uses, premorbid psychiatric/medical problems, time to be tested, etc.
- About 1/3-1/2 of clients entering treatment might have subtle impairment in cognitive functioning

Implications
on
Intervention/Treatment

Increased Motivation to Change

- Understand the negative impact of drug use on their cognitive functioning → added more weight on the cons side of using drugs

Increased Motivation to Change

- Develop the discrepancy
 - Create and amplify between present behavior and goals/values
 - Based on the review of assessment results, elicit self-motivational statement
 - “Is that what you expected?”
 - “How do you feel about this?”
 - Pick up non-verbal cues, use reflective listening to respond to both verbal and non-verbal reactions to feedback

Increased Motivation to Change

- Possibility of cognitive recovery after abstinence → instill hope

Treatment Plan

- Cognitively impaired patients showed more improvement with interactional group treatment than with CBT training, presumably because there were less mental processing demand
- Substance abusers with cognitive deficits were more likely to drop out of treatment and relapse faster

Modifications

- Tailored the intervention according to patients' current abilities (deficits)
- e.g. attention problem
 - quiet environment for intervention
 - reduced session length
 - increased session frequency

Modifications

- e.g. Learning and memory problems
 - use multi-mode of presentation materials (visual, verbal, experiential)
 - frequent feedback
 - more homework assignment
 - use of memory aids (calendar, reminders)

Modifications

- e.g. Executive functioning
 - Limited ability to change perspective/see alternatives
 - Abstract concept, complex judgment to be presented later
 - teach activity scheduling, behavioral skills first before cognitive re-structuring

Coping/Living with Deficits

- Set up realistic goals
 - Work that fits their current abilities
- Learn compensatory techniques
 - internal memory aids
 - e.g. visual memory, verbal association
 - external memory aids
 - e.g. alarm, calendar, posted reminder

Advice to Significant Others

- Increase their awareness and understanding of the cognitive deficits of the client
- Suggest ways for better communication
- Learning accommodations in school

Cognitive Assessment
under
Project MAC

Consideration/Limitation

- Goal of the project + clients from different centers → the presence of SW of the client + different roles of different parties
- Cognitive deficits among substance users vary → screening
- Resource constraints + availability of normative data → tests to be chosen
- Client's motivation to take part → one-off arrangement

3-Hour Arrangement

- 15 mins: basic information + brief introduction
- 90 mins: tests administration
- 60 mins: scoring
- 15 mins: debriefing + booklet

Booklet



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Tests Administered

General Intelligence

- Test of Non-verbal Intelligence (TONI) –III

Attention

- Digit Span (Forward)
- Digit Span (Backward)
- Stroop & Word Color Test (Chinese Version)

Learning and Memory

- Chinese auditory verbal learning test (CAVLT)
- Wechsler Memory Test (WMS) – III

Executive Functioning

- Verbal Fluency Test (Chinese Version)
- Ruff Figural Fluency Test
- Stroop Color and Word Test

Case Sharing

Case Sharing

18, f

Screening:

1. Pre-test

- Polydrug use, low attention, clear concept on harmful effects of drug taking but low motivation to change, low confidence**

2. Eye-Hand Coordination test

- Poor to low average**

Case Sharing

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SCID Interview – Structural Clinical Interview for DSM-IV

- Substance-induced psychotic disorder
- Substance Use disorder:
 - Alcohol Abuse and Dependence
 - Polydrug Abuse and Dependence
 - Mainly: Xanax and Ketamine

Cognitive Assessment Result

Type	Verbal Attention (Impaired)	Verbal Memory (Low Average)	Executive Functioning (Low Average on non-verbal)	Remarks
MDMA, Cocaine	✓	✓	✓	
Ketamine		✓		
Alcohol			✓	
Benzodiazepines		✓		
Polysubstances		✓	✓	

Motivation to Change

- Facilitate client share self-motivational statement
 - The cons side: negative influenced on academic performance
 - Develop the discrepancy: client hopes to have further study
 - Reflective listening: non-verbal reaction (Crying / anxious behavior)

Motivation to Change

- Intensive treatment
 - CBT treatment is not always suitable as client is so emotional
 - Client loses self-direction, easily influenced by groups / peers
 - Different themes in one session:
 1. counselling
 2. task or assignment
 3. rest

Motivation to Change

- **Abstinence Achievement**
 - Decrease frequency of drug use
 - Achieve abstinence for two to three weeks during intensive treatment

Motivation to Change

- Further treatment (BMS & Behavioral)
 - Increased session frequency (密而短)
 - Its importance in behavioral change (urine test)
 - Emotional support
 - Close contact with parents and school workers

Our Views

- Cognitive Assessment for clients with suspected cognitive deficits is suggested
- More than a tool to increase motivation to change
- Increased cooperation and communication among various parties are needed

Discussion