Behaviour Analysis and Cognitive Loss

A BEHAVIOURAL GERONTOLOGY WEBINAR

CLAUDIA DROSSEL, PH.D., PH.D. – EASTERN MICHIGAN UNIVERSITY

Agenda

Technical support	Karen Parrage, brainXchange
Introductions	Kathy Hickman, brainXchange
Important information	Stefanie Cali, Ontario ABA (ONTABA)
65-min presentation	Claudia Drossel, Eastern Michigan University
Q & A	Kathy Hickman, brainXchange

BACB continuing education units

Offered by ONTABA

Participants are eligible for 1 Type 2 CEU. Eligibility criteria include:

- Reviewing and participating in the webinar
- Demonstrating engagement with the content by completing a multiple-choice quiz

Instructions

The quiz can be accessed via this link (**COPY THE LINK NOW AND INSERT IT INTO YOUR BROWSER**)

https://www.research.net/r/BehaviouralGerontologyCEUSurvey

- All participants must independently submit one CEU quiz each.
- If you are watching this webinar in a group, each member of the group must submit one CEU quiz.
- You must complete the quiz within 10 days after the event date (**by Tuesday, June 20, 2017**)
- You must score more than 4 correct responses (out of 7 possible) to receive the certificate
- As part of the quiz, you must submit your BCBA no., your email, and your name as you would like it to appear on the certificate. Entering inaccurate information may result in a missed certificate.
- For questions, please email professionaldevelopment@ontaba.org

This information is valid only for the webinar on June 9, 2017. If you are viewing this webinar at a different date, you will receive different instructions.

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Major neurocognitive disorder (DSM-5)

- Evidence of significant cognitive decline
- Substantial impairment in cognitive performance
- Interference with independence in ADLs (“moderate”), at minimum IADLs (“mild”)
- Delirium, other potential factors leading to cognitive decline have been ruled out

American Psychiatric Association (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC: Author.

Neurocognitive disorders

Progressive neurodegenerative diseases

- Alzheimer's disease
- Lewy body disease
- Frontotemporal lobar degeneration
- Vascular disease

Other neurodegenerative diseases

- Vascular disease
- Traumatic brain injury
- Structural lesions
- Hypoxia
- Endocrine, metabolic, or nutritional conditions
- Immune disorders
- Infectious conditions

Misclassification of etiology is common:
AD -- Specificity 44-71
Sensitivity 71-87%
Beach, Monsell, Phillips, & Kukull (2012)

“Care over cure”

Team approach

Goal:

- Maintain fragile repertoires
- Prevent excess disability
  - Identify and change contingencies that might lead to premature withdrawal from activities and narrowing life space
  - Promote contingencies that ensure openness and participation

Alterations in stimulus control

Olfactory loss

Visual disturbances

- Colour, contrast, depth, motion

Auditory disturbances

- Binaural versus monaural verbal stimuli

Vestibular changes

- Gait disturbances
- Fall risk

e.g., Brønnick, Nordby, Larsen, & Aarsland, 2010; Hamilton, et al., 2012; Idrizbegovic, et al., 2011; Kovács, 2004; Money, Kirk, & McNaughton, 1992; Wood et al., 2014

Other affected behavioural processes

Breakdown of chains

- A – B – C – A – B – C – A – B - C
- ADLs, IADLs

Decreased behavioural variability

- Difficulties problem-solving

Predominance of immediate consequences and decreased sensitivity to long-term consequences

- Impulsive behavior

Diminished verbal repertoire

Limited generativity and creativity

- fewer elaborated ideas, more topic changes

Loss of contextual control over verbal behaviour

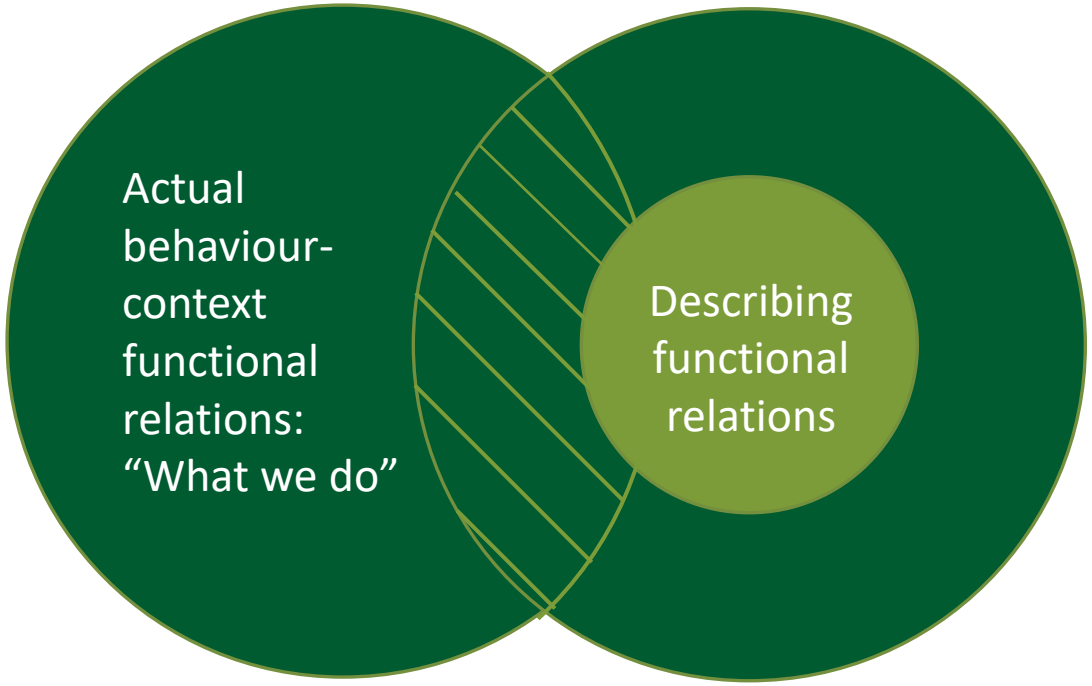
- “formulaic language” or “small talk”
- intraverbals
- metaphoric speech
- failure to tact private events and mand accordingly
  - 37% of community-dwelling individuals with MND have undetected illnesses

Gitlin et al., 2011; Hodgson et al., 2010; Killick & Allan, 2001

Diminished verbal repertoire

1. Repertoires decline at different rates
2. Different contingencies work on verbal behaviour and other behaviour

Diminished verbal repertoire



Skinner, B. F. (1957/1992). *Verbal behavior*. Acton, MA: Copley Publishing Group.
Literature on "Rule-Governed Behavior" and "Say-Do-Correspondence"

Reliance on verbal report

Overestimation of skills

Lack of say-do correspondence

Infantilization

Perception of individuals with neurocognitive loss as unpredictable, possibly dangerous

- Perception of need for intensive and harsher treatment than gentle psychosocial intervention

Majority of family care partners endorse using coercive means to produce behaviour change

- Hostility and criticism → emergence of affective and behavioural disturbances 15 to 18 months later
- Shorter care recipient survival time

→ inadvertent extinction and/or punishment contingencies

Cooper et al., 2009; McClendon, Smyth, & Neundorfer, 2004; Mehta & Farina, 1997; Vitaliano et al., 1993

Excess disability

Many individuals with cognitive losses

- live in conditions that
  - accelerate decline
  - fail to deliver necessary assistance and advocacy
- are more disabled than predicted by the neurodegenerative disease alone

Rule-outs

- Are co-morbidities managed? What do the data say?
- Have discomfort and pain been ruled out?
- Is a referral for medication review indicated?
- Are proper nutrition and hydration guaranteed?
- Have voiding schedules been implemented?
- Is sensory loss corrected?
- Are regular sleep and exercise regimens in place?
- Is there regular access to meaningful activities?

Functional approach

Behaviour can be understood in terms of its history and its current context,

even when severe impairment is present.

Functional approach

Antecedents	Behaviours	Consequences
Step 5: Examine historical and record proximal antecedents – when, where, around whom does the behaviour occur?	Step 1: Specify target – what exactly is the client doing? How often?	Step 4: Record immediate consequences – how do people respond? Frequency changes? What does the behaviour accomplish?
Step 3: Consider the broader psychosocial context – how has MND changed the client's roles, activities, and access to family and friends? How do family and friends or staff perceive the difficulties?	Step 2: Gather a behavioural history – is this novel behaviour, has it happened before? Does it fit a longstanding pattern? Is it of a sudden or gradual onset?	Step 6: Conduct a general reinforcer assessment – does the client have access to meaningful activities?

From McCurry & Drossel (2011)

Do not underestimate history effects!

The role of history significantly distinguishes work with adults in late-life with cognitive loss.

Examples:

- 1. “Open the door” – community living center, Jim
  - Target behaviour: Loud pounding on the exit door, yelling: “open the door!”
- 2. “Rise and shine!” – specialized memory care, Dorothy
  - Target behaviour: Throwing residents out of bed

Functional approach

Antecedents	Behaviours	Consequences
Step 5: Examine historical and record proximal antecedents – when, where, around whom does the behaviour occur?	Step 1: Specify target – what exactly is the client doing? How often?	Step 4: Record immediate consequences – how do people respond? Frequency changes? What does the behaviour accomplish?
Step 3: Consider the broader psychosocial context – how has MND changed the client's roles, activities, and access to family and friends? How do family and friends or staff perceive the difficulties?	Step 2: Gather a behavioural history – is this novel behaviour, has it happened before? Does it fit a longstanding pattern? Is it of a sudden or gradual onset?	Step 6: Conduct a general reinforcer assessment – does the client have access to meaningful activities?

From McCurry & Drossel (2011)

Functional approach

Respect and take into account person's preferences, history, and social sensitivities

Examples

- "Aggressive behaviour"
- "Wandering"
- "Accusatory behaviour"
- "Hoarding" and other unusual behaviours

Functional approach

Respect and take into account person's preferences, history, and social sensitivities

Examples

- "Self-protective behaviour"
- "Wandering"
- "Accusatory behaviour"
- "Hoarding" and other unusual behaviours

Work with care partners

- Family-oriented self-help books (e.g., McCurry, 2006)
- Clinical tools

  Third-wave behaviour therapies (e.g., Acceptance and Commitment Therapy, Dialectical Behavior Therapy skills group)

Resources

Drossel, C., & Fisher, J. E. (2006). Dementia: The role of contingencies in excess disability. *European Journal of Behavior Analysis, 7*(2), 177-180.

Drossel, C., Fisher, J. E., & Mercer, V. (2011). A DBT skills training group for caregivers of persons with dementia. *Behavior Therapy, 42*(1), 109-119.

Drossel, C., & Trahan, M. (2015). Behavioral interventions are first-line treatments for managing changes associated with cognitive decline. *The Behavior Therapist, 38*(5), 126-131.

Fisher, J. E., Drossel, C., Yury, C., & Cherup, S. (2007). A contextual model of restraint-free care for persons with dementia. In P. Sturmey (Ed.), *Functional analysis and clinical treatment* (pp. 211-237). San Diego, CA: Elsevier.

McCurry, S., & Drossel. C. (2011). *Treating dementia in context: A step-by-step guide to working with individuals and families*. Washington, D.C.: American Psychological Association.

McCurry, S. (2006). *When a family member has dementia: Steps to becoming a resilient caregiver*. Westport, CT: Praeger.

Thank you. Now to Q & A …

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https://bgsig.wordpress.com/

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