

Reliability & Validity of the Revised Triple C: Checklist of Communication Competencies for Adults with Severe & Multiple Disabilities

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- Few tools to assess skills of adults functioning at unintentional to early symbolic level (most start at symbolic level)
- Access to specialist services limited
- Disability Support Workers (DSW) integrally involved with:
 - Assessment
 - Implementing communication strategies

- Accuracy of information provided by staff is questionable
 - Over-estimate comprehension skills (Purcell, Morris, McConkey, 1999)
 - Problems identifying non-verbal signals
 - Difficulty making overall judgement re: ability
- Triple C asks DSW to report on observable behaviours
- Triple C seeks information from familiar communication partners (6 months +)

Why involve DSW in assessment process

- Aim to embed appropriate communication strategies into daily interaction
 - Participation in assessment process – increase knowledge and increase sensitivity to potentially communicative behaviours
 - Shared ownership of outcomes

- Triple C target group
 - Unintentional, early intentional/symbolic communicators
 - Original Triple C = defined 6 stages
- Stage 1: Preintentional reflexive
- Stage 2: Preintentional reactive
- Stage 3: Preintentional proactive
- Stage 4: Intentional informal
- Stage 5: Intentional formal
- Stage 6: Intentional referential

History of Triple C

- Developed in response to need. Project involving DSW in assessment & intervention process (Picture It: Bloomberg, West & Iacono. 2003)
- Retrospective study demonstrated internal consistency of tool. Reviewed 172 completed checklists.
- Problem with Stage 1 (KR20 = 0.77) cf. Stages 2 – 6 (KR20 = 0.85+) Kruder Richardson

Triple C (revised)

- Collapsed stages 1 & 2 – clinically = same intervention options
- Changed terminology
- Each item scored - observed or not observed
 - Unintentional Passive (Stage 1 / 2)
 - Unintentional Active (Stage 3)
 - Intentional informal (Stage 4)
 - Symbolic (Basic) (Stage 5)
 - Symbolic (Established) (Stage 6)

Research aims

- For revised Triple C determine;
 - support worker agreement for each item
 - internal consistency & underlying constructs
 - extent of agreement between Triple C (DSW data) & speech pathologist (observations)
- Ethics approval gained (Proxy next-of-kin for clients)

Participants

- Adults with intellectual disability
 - Not linguistic (less than 50 words)
 - $n = 72$ - males (44); females (28)(Direct observations $n = 20$)
- Support workers
 - No training or experience with the Triple C
 - Worked for 6 mo. + with adult (Mean = 4 years)
 - $N = 118$ - males (29); females (89)
 - Most completed one checklist for one person (76). Some did more than one. eg. 25 did 2

Procedure

- 2 – 3 hour training session by researcher
 - How to complete Triple C: teaching video &/or shared example using knowledge of client not involved in study
 - Complete consent forms & background questionnaire
 - Identified pairs of DSW per client
- 2 weeks to complete checklist
 - Each item observed or not observed
 - Complete checklist for individual (asked not to discuss with other DSW in the pair)
 - Checklist submitted (de-identified information)

Allocation of communication stage

- Completed checklist - 2 researchers used consensus to assign stage
- 20 adults in stage 2 of study
 - Observed by pairs of speech pathologists (2 - 3 hours)
 - Observed at home or day service
 - Arrived at estimate of person communication according to Triple C stages

Results

- Support worker agreement
 - Agreement per item = $\frac{\text{number of agreements}}{\text{agreements} + \text{disagreements}} \times 100$.
- Mean =
 - Unintentional passive (85%)
 - Unintentional active (81%)
 - Intentional informal (83%)
 - Symbolic (basic) (84%)
 - Symbolic (established) (87%)

Moderate to high agreement between stage assignment for
DSW 1 vs DSW 2 data Cohen's kappa $k = 0.63$ ($p < .001$)

Results

- Relatively even spread of checklist assigned across all 5 stages

Stage	Stage assignment <i>n</i> = 64 (as a %)	
	DSW 1	DSW 2
Unintentional passive	10 (16 %)	12 (19 %)
Unintentional active	14 (22 %)	12 (19 %)
Intentional informal	12 (19 %)	16 (25 %)
Symbolic (basic)	16 (25 %)	13 (20 %)
Symbolic (established)	12 (19 %)	11 (17 %)

Results

- High internal consistency

(i.e. how items relate to each other within the stages)

- KR 20 = 0.97 for both DSW1 & DSW2

- Construct validity

- One underlying factor – pre-linguistic communication

- Difference in stage allocation was never more than one stage between DSW 1 & DSW 2 data

Discussion

- High level of agreement between DSWs may be due to:
 - Training provided eg. Information on stages, relevant examples
 - Nature of the task ie. Report on specific behaviours (not make a judgement about skills)
- First study show one factor with the possibility of a second not supported in second study
 - Larger sample size would always be preferable but results were strong

Discussion

- Poor agreement between stage according to DSW checklist and researcher (speech path) observations although never more than one stage difference.
 - Can't say who was right
 - Can't use another tool to check (as there aren't any)

Clinical implications

- If used collaboratively (DSW gather information, speech path confirms result) can be used with confidence
- Triple C designed to sensitise communication partners to potentially communicative behaviours
- Identify communication strategies to support the client – InterAAction manual

Revised manual

- Targetted at speech pathologists
- How to assess & what to observe (for each item)
- Pre-use training essential
 - DVD not available
 - Practice on shared client
 - Practice with case study scenarios with example clients
 - Administration and scoring information
- Modified and simplified language