

Data Collection in Consultation: Ensuring Simple, Meaningful, and Efficient Techniques

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CBC in the Early Grades



Value of Data Collection

- Accurate and effective data collection procedures are essential for best practice in research and practice
- Two key components of a best practice data collection procedure are:
 - Properly conceptualizing the depth and breadth of data that should be collected
 - Making data collection practical and meaningful for consultees and consultants

Goals for the Session

- Discuss data collection procedures for consultation in research, practice, and how they can inform one another
- Describe the consultation process and procedures
- Discuss skills and strategies for collecting data efficiently in consultation

Skills Highlighted in the Session

- Consultation-based data collection skills will be addressed:
 - How to collect data efficiently
 - How to involve parents and teachers actively in data collection
 - How to graph and evaluate outcomes in consultation
 - How to use technology effectively

Behavioral Consultation

- Behavioral Consultation:
 - An indirect form of service delivery in which a child's needs are met by a parent or teacher working with a consultant to develop, implement, and evaluate intervention strategies (Sheridan, Kratochwill, & Bergan, 1996)
 - Developed within the principles of applied behavior analysis and involves structured stages
 - Specific behavioral consultation stages:
 - Problem Identification
 - Problem Analysis
 - Treatment Implementation
 - Treatment Evaluation

Conjoint Behavioral Consultation

- Conjoint Behavioral Consultation (CBC) is defined as:
 - A structured, indirect form of service delivery in which teachers and parents are brought together to collaboratively identify and address students' needs (Sheridan et al., 1996; Sheridan & Kratochwill, 1992)
- CBC is an extension of the traditional behavioral consultation model, simultaneously addressing home and school concerns and building effective partnerships
- Parents and teachers monitor a child's behavior and work together to design an intervention

Aims and Goals of CBC

- Specific aims of the process include:
 - Prioritizing shared concerns across home and school settings
 - Evaluating factors that contribute to the identified concern
- Goals of CBC focus on addressing:
 - Specific needs of the child, while working collaboratively with both a child's teacher and caregiver(s)
 - Strengthening home-school partnerships

Conjoint Behavioral Consultation: Empirical Support

- Empirical investigations incorporating methodologically rigorous designs have revealed CBC to be an efficacious model of consultation (Sheridan, Eagle, Cowan, & Mickelson, 2001)
- Specifically, CBC has been found to be:
 - An acceptable model of service delivery as reported by school psychologists, families, and teachers (Freer & Watson, 1999; Illsley & Sladeczek, 2001; Sheridan & Steck, 1995)
 - An evidence based consultation model effective in addressing students' academic, behavioral, and social needs (Guli, 2005; Sheridan et al., 2001)
- CBC is rated by parents and teachers as the most acceptable consultation approach for academic, behavioral, and social-emotional problems when compared with teacher consultation models

Conjoint Behavioral Consultation: Empirical Support

- Despite promising evidence for the efficacy of CBC from single-case experimental research, no large scale, randomized studies had previously been conducted
- Challenges associated with efficiency and intervention integrity have led to a need for increased rigor in implementation and experimentation
- Long-term outcomes and indirect effects on parents' beliefs and home-school partnerships had also not previously been assessed for CBC

Experimental Investigation

- ***Purpose and Aims of the CBC in the Early Grades Study***
 - To evaluate the efficacy of CBC as an intervention that addresses concerns of students whose disruptive behaviors place them at risk for academic failure
 - *Aim 1:* To evaluate, via a randomized trial, the immediate and long-term effects of CBC on academic, behavioral, and social outcomes of students with disruptive behaviors
 - *Aim 2:* To determine the immediate and long-term effects of CBC on parents' participation in problem solving with their child's teacher, self-efficacy, role construction vis a vis their level or responsibility in their child's education, and relationship with their child's teacher
 - *Aim 3:* To evaluate the extent to which teachers' relationships with parents and beliefs/practices pertaining to parental involvement predicts parent and student outcomes

Experimental Investigation

- ***Experimental Design***

- Two-cohort randomized experimental design (45 classrooms in each cohort)
- Teachers and parents from each classroom are randomly assigned (at the classroom level) to one of the following two conditions for student support:
 - *Traditional support (Control) condition:* Students receive regular student support as is typically provided by school personnel, including school psychologists, counselors, and specialists
 - *CBC (Experimental) condition:* Participants met with the consultant for approximately 4-5 conjoint consultation sessions over the course of about 8 weeks

Key Concepts for Consultation Data Collection

- Research-based data collection can be adapted for practicality
- Dual matriculation properties of the data in terms of their use for research *and* practice
- Data collection can be meaningful for consultees

Making Data Collection Meaningful

- Data collection can be more meaningful by:
 - 1) Providing rationales for data collection (i.e., explain uses and importance of data collection)
 - 2) Discussing data regularly
 - 3) Using data for decision making (e.g., goal setting)
 - 4) Using data to give consultees feedback about integrity
 - 5) Using data to discuss the child's progress in a clear way by providing visual representations (e.g., graphs)
 - 6) Using data collection forms for self-monitoring of consultees' behavior

Making Data Collection Efficient

- The data collection process can be made efficient by:
 - 1) Discussing the best way for consultees to fit data collection into their schedules
 - 2) Making the forms easy to use and navigate
 - 3) Decreasing the number of documents (two-sided)
 - 4) Allowing consultees to create the forms they use
 - 5) Using permanent products for data collection
 - 6) Using an easy behavior recording method (e.g., use rating scales instead of frequency or duration recording)
 - 7) Involving the child, his/her peers, and siblings

Strategies to involve parents and teachers in data collection

- Making data collection efficient and meaningful will increase involvement of parents and teachers
- Be flexible
- Practice data collection
 - Including how to use all forms
- Be supportive
- Reinforce data collection
- Validate and affirm consultees for collecting and sharing data

Data Matrices

- Through consultation, data can be collected from:
 - Students
 - Families
 - Schools
- Examples of a variety of student, family, and school data are provided

Primary Types of Data Collected in Consultation

- Behavioral Case Outcomes
 - To assess progress on the target concern
- Treatment Implementation Integrity
 - To assess the integrity of the treatment / intervention
- Process Integrity
 - To assess the integrity of the consultation process

Behavioral Case Outcomes

- Can be measured by:
 - Performance Rating Scales (Steege, Davin, & Hathaway, 2001)
 - Parent Daily Report Checklists (PDR; Chamberlain & Reid, 1987)
 - Behavioral Observation of Students

Case Outcomes: Performance Rating Scale (Steege et al., 2001)

- Used by consultees to monitor child's progress toward goals
- Lists target behavior and goal(s)
- Individualized rating scale, rated on a 5-point scale
- Recorded daily

Case Outcomes: The Parent Daily Report Checklist (PDR; Chamberlain & Reid, 1987)

- The PDR checklist consists of 34 behaviors (e.g., arguing, teasing)
- During the initial session parents indicate if any of the behaviors have been a concern
 - Subsequently, parents indicate if the behaviors have been displayed during the previous 24 hours
- To attain a comprehensive view of behaviors, it may be most helpful to:
 - Use for continuous data collection during baseline and treatment phases

Case Outcomes: Behavioral Observation of Students

- With appropriate data collection procedures, behavioral observations can provide meaningful information about the behavior
- Behavioral observations can be completed by consultees, consultants, or independent observers
- Independent observers may be able to provide the most accurate and unbiased view of the behavior

Case Outcomes: Behavioral Observation of Students

- Behavioral observations are most helpful when:
 - A discrete, observable target behavior definition is established
 - The target time / setting is used during all observations
 - Consistent and appropriate observation methods are used

Treatment Implementation Integrity

- Assess whether the consultee(s) delivered the intervention as intended
- Treatment integrity adds meaning to the outcome data:
 - Changes in behavior can be accounted for by variations in treatment integrity
- Treatment integrity may be measured via Plan Summary Forms by:
 - Consultee self-report
 - Consultant observations
 - Use of permanent products

Treatment Integrity: Plan Summary Form - Self-Report

- Source:
 - Consultee
- Description:
 - Provides a list of the essential steps for the intervention
 - Determines percentage of steps that were completed

Treatment Integrity: Plan Summary Form - Consultant Observation

- Source:
 - Consultant
- Description:
 - The consultant observes a consultee implementing the intervention
 - Plan summary form is completed by the consultant based on the observation to determine the percentage of steps completed as intended

Treatment Integrity: Plan Summary Form - Permanent Products

- Source:
 - Permanent Products (e.g., home note, chart moves)
- Description:
 - Outcome determined by the percentage of steps validated by permanent products
 - Permanent products could be reviewed by another consultant or peer to determine inter-rater reliability for the percentage of steps validated using a plan summary form

Process Integrity

- Assess the integrity of the consultation process
- Process integrity can be assessed by recording all consultation meetings
- Process objectives checklists aid in assessing process integrity by outlining key components of the process
 - Checklists can be constructed for all stages of consultation
- Based on the recording and objectives checklists:
 - Self-assessments of the process can be made by consultants
 - Independent observers can assess the process by listening to the recording and completing objective checklists

Computer-based Behavioral Observations

- There are many electronic and computer-based behavioral observation programs
- Many use interfaces through Personal Digital Assistants (PDAs)
- The PDA-based behavioral observation software can be used in a variety of target settings
- PDA-based behavioral observation programs aid in collecting accurate data efficiently

Behavioral Observations: INTMAN (Tapp et al., 2006)

- **Interval Manager** (INTMAN) is an example of a PDA-based behavioral observation program
- Behaviors are observed and recorded through INTMAN using a partial interval recording method
 - The behavior is recorded once during the interval (e.g., 30 sec) regardless of how long it lasts or how many times it occurs during the interval
 - Behaviors are recorded through a PDA interface

Behavioral Observations: INTMAN (Tapp et al., 2006)

- INTMAN offers many features when creating an observation system
- The intervals are customizable
 - “Observe time” and “record time” are determined by the user
- An observer can collect data on 1-16 target behaviors at one time
 - All of which are completely customized by the user

Behavioral Observations: INTMAN (Tapp et al., 2006)

- INTMAN includes the following features to ensure accurate data are collected:
 - Customized “record time”
 - Visual and audio cues for the observer
 - Automated interval progression
 - “Tap-button” selection

Behavioral Observations: INTMAN (Tapp et al., 2006)

- Data from behavioral observations can be exported to a PC for analysis through the INTMAN PC program
- Within the INTMAN PC program, some analyses are possible:
 - For example, Inter-observer reliability can be calculated
- Observation data can also be exported to many comma delineated databases

Questionnaire Development

- There are three primary goals for questionnaire development:
 - 1) Ensuring the questionnaire is easy for individuals to complete (e.g., readable)
 - 2) Ensuring the necessary data are easily extrapolated from the questionnaire
 - 3) Accurately transferring standardized measures (e.g., BASC) to a consultee-friendly packet

Questionnaire Development

- To promote ease of completion:
 - Consistent formatting across standardized measures and demographic items
 - Clear and concise directions
 - Feasible completion length

Questionnaire Development

- It may be helpful to have the survey available in many formats:
 - Paper and pencil
 - Online
 - Online delivered through email

Questionnaire Development Software

- There are many kinds of software that aid in survey development
- SNAP Surveys (Mercator, 1987) is one program that allows for the complete customization of items
- It may be most helpful for individuals who do not have other electronic resources available



Case Example

- **Case Background (Eric):**
- School
 - Second grade male
 - Frequent office referrals for disruptive behavior
 - Spends 1 class period per day in third grade for more challenging reading
 - High activity level and easily distracted
- Home
 - Lives primarily with his mother
 - Spends some weekends with his father
 - Has no siblings.
 - Moderate income level and standard of living.
 - “Energetic” and has a hard time following directions.

Case Example: Strengths and Needs

- Strengths

- Eric is very smart. He is gifted in reading
- He is a creative problem solver
- He is very strong willed and determined
- He is energetic and passionate

- Needs

- Not paying attention, daydreaming, off-task
- Following directions
- More interaction with friends
- Not being responsible for behavior.
 - He denies his misbehavior even when “caught in the act”

Case Example: Target Behavior and Setting

- **Target Behavior Definition:**

- Home

- Following directions – Begins task within 10 seconds of being asked

- School

- Following directions – Begins task within 10 seconds of being asked

- **Behavior Setting:**

- Home

- evening routine/getting ready for bed

- School

- math time - specifically, guided practice and independent practice

Case Example: Function and Goals

- **Function of Behavior:**

- Home: Escape

- He doesn't want to get ready for bed. He'd rather stay up and play.

- School: Escape

- He would rather just sit there than get started on his work

- **Behavior Goal:**

- Home

- Eric will begin within 10 seconds of being asked 3 out of 4 evening tasks

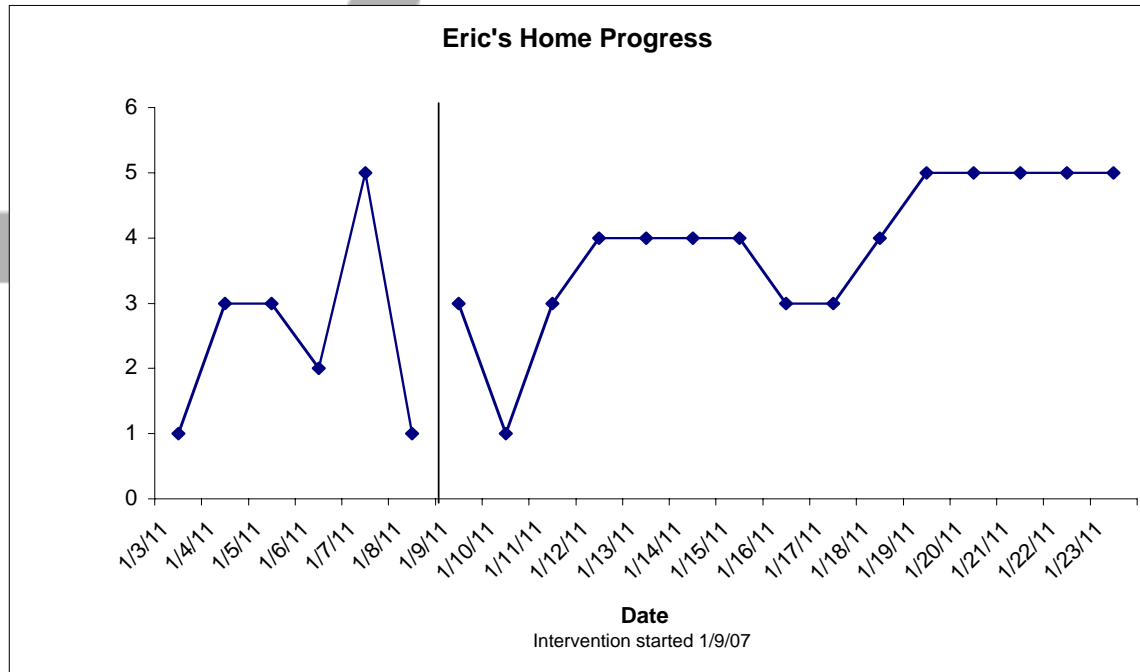
- School

- Eric will begin within 10 seconds of being asked 3 out of 4 math tasks

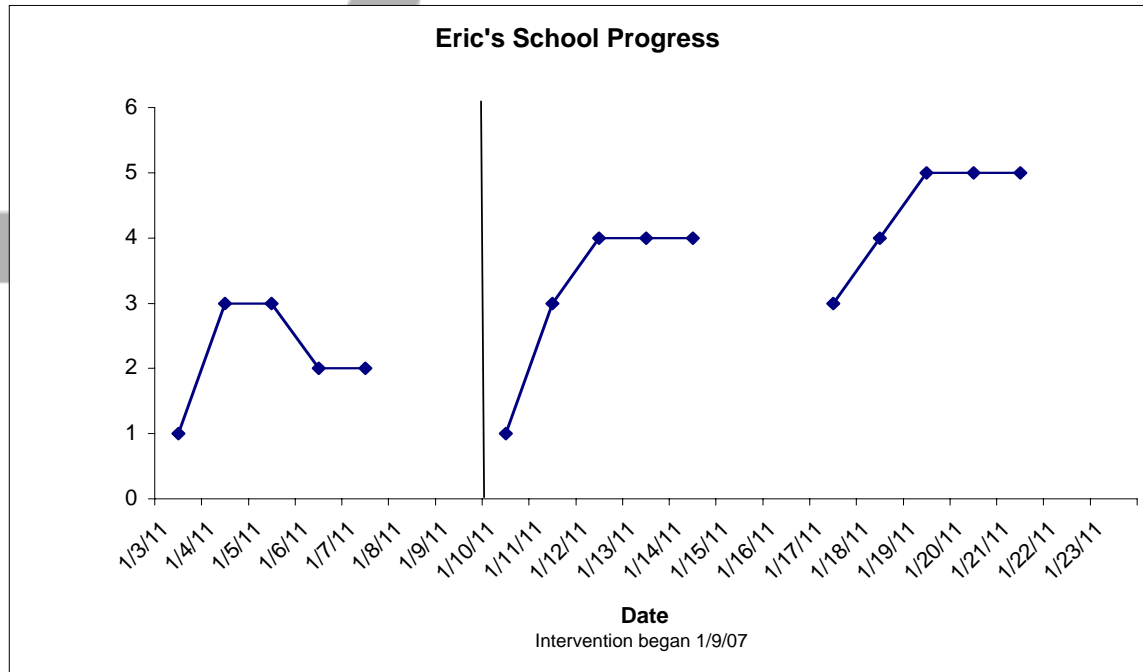
Case Example: Case Outcomes - Performance Rating Scales

- Data were collected by consultees using performance rating scales
- Performance rating scale data represents data for the target behavior and target setting

Case Example: Graph of Eric's Data from Home



Case Example: Graph of Eric's Data from School



Case Outcomes: Performance Rating Scales

- Data from Eric's Performance Rating Scales indicated that his behavior at home and school improved after the intervention was implemented
- This information may indicate that the intervention was successful
- Eric's behavioral goals were adjusted (raised) based on his improved behavior

Treatment Integrity: Plan Summary Forms

- Plan summary forms were completed at home and school
- Plan summary forms were used to assess the degree to which the plan was implemented as intended

Treatment Integrity: Plan Summary Forms

- Data from Eric's plan summary forms indicated that the intervention was consistently and accurately implemented at home and school
- Data from consultant observations and permanent products corroborate consultee self-reported integrity data

Strategies for Involving Consultees in Data Collection

- Parents and teachers will be more likely to be actively involved in data collection when:
 - Data collection is meaningful
 - Data collection is efficient
- Consultees can be involved in:
 - Target behavior selection and definition
 - Goal development and setting
 - Operationalizing measurement
 - Graphing and evaluation interventions

Strategies for Involving Consultees in Data Collection

- Be flexible and creative:
 - Be creative with the data collection method
 - Involve consultees in operationalizing measurement
 - Ensure data collection is feasible for everyone
 - Be creative to help it fit into a variety of routines

Strategies for Involving Consultees in Data Collection

- Ensure data are collected accurately and efficiently:
 - Model the data collection procedures
 - Reinforce data collection
 - Provide incentives
 - Role-play data collection methods
 - Observe consultees collect data
 - Provide meaningful feedback

Strategies for Involving Consultees in Data Collection

- Be supportive:
 - Offer to periodically collect data
 - Be PRESENT and available to problem-solve and talk through issues
 - Classroom observations
 - Home visits

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