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

S. Andrew Garbacz, M.A.
Michelle Swanger-Gagné, M.A.
Amanda L. Witte, M.A.
Kathleen A. Gill-Hraban, M.A.
Todd A. Glover, PhD

University of Nebraska-Lincoln

The Nebraska Center for Research on Children, Youth, Families, and Schools (CYFS; http://cyfs.unl.edu)

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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 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

Eric's Home Progress

Date
Intervention started 1/9/07
Case Example: Graph of Eric’s Data from School

![Graph of Eric's School Progress]

Date
Intervention began 1/9/07
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
For more information, contact:

- Dr. Susan M. Sheridan  
  Nebraska Center for Research on Children, Youth, Families and Schools  
  216 Mabel Lee Hall  
  University of Nebraska at Lincoln  
  Lincoln, NE  68588-0235  
  (402) 472-2448  
  ssheridan2@unl.edu  
  http://cyfs.unl.edu
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