

## CLINICAL CASE APPLICATIONS

# Examining the Potential Impact of a Family Session in Therapeutic Assessment: A Single-Case Experiment

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Most clinicians concede the benefits of conceptualizing children in systemic terms. Yet, many child assessments involve parents only on a limited basis. The Therapeutic Assessment model for children and families (TA–C) emphasizes parental involvement and family-driven collaboration throughout the intervention. Child TA has shown promise as an effective brief intervention (e.g., Smith, Handler, & Nash, 2010; Tharinger et al., 2009). Family intervention sessions (Finn, 2007; Tharinger, Finn, Austin, et al., 2008) are an integral component of the child TA model in facilitating familial changes. However, TA–C research has yet to empirically examine the potential impact of a family session on treatment trajectory. This case study includes an extended presentation of the development and execution of a family session. The authors use a daily measures time-series experiment to empirically examine the clinical effectiveness of the TA–C and the hypothesis that the family session was a tipping point in the trajectory of improvement.

Therapeutic assessment (TA; Finn, 2007) is the most well-documented and empirically supported collaborative or therapeutic approach to psychological assessment. A recent review of TA for children and families (TA–C) indicates growing empirical and clinical evidence of the model's effectiveness (Smith, 2010). However, questions remain regarding the processes underlying the improvements families experience as a result of participation: Particularly, which components of the model produce change, and for whom? The results of the studies conducted by Smith and colleagues (Smith, Handler, & Nash, 2010; Smith, Wolf, Handler, & Nash, 2009) suggest that particular children and particular families improved during TA–C itself, while others experienced significant positive changes only during the follow-up period. The reasons for this differential response are currently unknown.

This case study, describing the TA–C of a 12-year-old boy and his father, focuses on the family session (Finn, 2007; Tharinger, Finn, Austin, et al., 2008), which is one of the primary interventional components of TA–C. Using the experimental single-case time-series design employed in previous research (Smith, Handler, et al., 2010; Smith et al., 2009), we (a) test the extent to which changes in the reported daily measures coincided with the onset of TA–C, and (b) examine the potential impact the family session might have had in shifting the trajectory of improvement. We present the case example, focusing on the development and execution of the family session, which is followed by the research aspects of the study.

### CASE EXAMPLE: DAVID

The case example of David and his father adheres to the comprehensive TA–C model described previously in the literature (e.g., Hamilton et al., 2009; Smith, 2010; Smith, Finn, Swain, & Handler, 2010; Smith et al., 2009; Tharinger et al., 2009; Tharinger, Finn, Wilkinson, & Schaber, 2007; Tharinger, Krumholz, Austin, & Matson, in press). The procedures and arrangements of each session, including mini-consultations, a video link for parent observation, and modifications specific to the one-assessor variation of TA–C, are described in detail elsewhere (Smith, Handler, et al., 2010).

### *The Initial Meeting*

*Presenting Problem and Assessment Questions.* Scott<sup>1</sup> referred his son, David, for a psychological evaluation at a university-based outpatient clinic. David was small in stature for his age and had a very slight build. Scott's reported concerns about David were his lackluster academic performance, problems relating to peers, and apparent self-esteem issues. Scott held many crystallized ideas about his son, for example, reporting that David's social problems were due to the other children's jealousy of his intelligence: "They just aren't as smart as David and it makes it hard for them to get along," he remarked. In school, David reportedly had a tendency to rush through assignments and exams, resulting in mediocre grades. When Scott was asked his impression of this behavior, he quickly said, "I think he's just bored in class. I read that gifted children get bored and get bad grades when they aren't being challenged." Scott also expressed concern about David's self-esteem, given his

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<sup>1</sup>Names have been changed and other measures have been taken to protect confidentiality. Additionally, Scott and David provided consent to publish this case study with measures taken to protect the family's identity. Consent and assent to treatment were also garnered prior to the onset of the TA–C.

difficulties with peer relationships. The first author, who served as the clinician for this case, under the supervision of the third author, then asked Scott to produce a few questions he hoped the assessment could answer. The following three questions were generated: Why does David have problems in school and how do we motivate him? Why does David have problems relating to his peers? Why does David have low self-esteem?

#### *Additional Background Information*

David lived with his married biological parents and younger brother (age 7). His mother was unable to participate in the TA–C because the family lived in a very rural area, which was far from the clinic, and they were unable to procure child care for David's sibling. The absence of David's mother in the TA–C process was somewhat suggestive of the close relationship David had with his father. Because the first author never met the mother, it was difficult to infer her place in the family and impact on David. This situation also necessitated a focus on dyadic issues during the family session, as opposed to the family systems approach typically sought. David's history was free of any trauma, medical issues, and significant behavioral problems, and he was reportedly an easy-going young child. David was in the sixth grade at a public elementary school. He had few disciplinary issues and had achieved mostly Bs throughout. He reportedly enjoyed history, particularly the Civil War, and hoped to become an aeronautical engineer someday.

#### *Results of the Test Administration*

Over the course of the next three meetings, David was administered a battery of self-report and performance-based tests. For conciseness, results of the test administration sessions are presented as they pertain to the development of the family session.

During the first session, David was administered the Wechsler Intelligence Scales for Children, Fourth Edition (WISC–IV; Wechsler, 2003). When the test was introduced, David reported that his father had told him he was going to take tests to find out how smart he was. Similar to his father, David seemed to value his intelligence. He felt that his teacher and peers were inhibiting him from "showing his potential." Reminiscent of his father, David rationalized his problems with his peers by saying, "The other kids are just jealous."

Although David appeared very confident of his performance on the WISC–IV, he also seemed anxious about doing well, perhaps due to his father observing, or the high expectations he and his father shared. At the end of the test, the first author asked David, "How do you think you did?" He quickly replied, "Pretty good, I think. Most of the questions were easy."

The first author then joined Scott in the observation room for the mini-consultation (Tharinger et al., 2007) in which an open dialogue occurs between the clinician and parent(s) in regard to the interactions between the child and clinician during test administration, potential hypotheses based on the child's test responses, as well as the parents' observations and reactions. Scott was asked to share his observations of the testing. He responded, "Well, I couldn't see some of the tests all that well over the video, but he didn't do that well on some of the questions you asked him [the Information and Comprehension subtests in particular]. But I still think he did well overall." Having minimized the contradictory evidence he had witnessed, Scott emphatically added the qualifying remark, most likely in response to his own

anxiety after recognizing that his son had, in fact, not done particularly well. Results of the WISC–IV confirmed that David's performance on the test was unexceptional. His Full Scale IQ of 102, Verbal Comprehension of 106, Perceptual Reasoning of 100, Working Memory of 91, and Processing Speed of 103 all fall in the average range.

During the second testing session, David was orally administered the Millon Pre-Adolescent Clinical Inventory (M–PACI; Millon, Tringone, Millon, & Grossman, 2005) and the Sentence Completion Test (Haak, 2003). These instruments were administered orally, as opposed to the standard administration of having the child complete the test on his or her own, to facilitate parental observation and enhance their curiosity regarding the child's feelings and problem behaviors. As David responded, the first author marked items for follow-up questioning, when a more thorough explanation of his response might be beneficial for both Scott and the first author to hear. Conducting an extended inquiry (Handler, 2008) in this manner also provides a client-specific context from which to interpret norm-based scores. David's responses illuminated his feelings about school and his peers, including hurt feelings, resentment, and a hint of superiority. When asked what made him angry or frustrated he replied, "When I try and tell the teacher that the other kids are doing something wrong and the other kids get mad at me and the teacher tells me not to be a tattletale. And when other kids come up and bully me, I get mad at them." David was asked what made him sad most of the time. He responded, "I can't have friends. I just get picked on and called names." When asked why it was hard for him to control his feelings, he said he loses his temper when the other children make fun of him. Scott later remarked that he was surprised at how badly his son felt.

Norm-based results of the M–PACI also provided useful information. The two highest scores were Conforming (90) and Disruptive Behaviors (87). He also scored in the clinical range on Confidence (72), Inhibition (72), Anxiety and Fears (74), and Attention Problems (78). These results suggest that David vacillates between a desire to be compliant and a wish to be more assertive with others. He appears more interested in pleasing authority figures than in making friends. Furthermore, he attempts to hide feelings of personal inadequacy and insecurity by being cooperative and conforming. He desires to be more expressive of his underlying feelings of dejection, resentment, depression, and hostility. He probably feels as though his abilities and efforts have been unappreciated, which has left him feeling misunderstood, disillusioned, unworthy, and miserable. He is very self-conscious of his behavior problems and is inclined toward self-blame and self-punishment. He appears to have adopted his father's rationale for being considered an outcast by his peers, preferring to avoid them, presumably as a means of avoiding rejection and hurt feelings.

At the end of this session David completed the House-Tree-Person Test (HTP; Buck, 1966). His male figure proved to be the most fruitful of these drawings. David's male drawing was very large, with broad shoulders and big arms, and wore an athletic jersey. When the first author presented this picture to Scott in the mini-consultation and asked for his impressions, he replied contemplatively, "Well, he looks very strong and he's standing like he's trying to look big and tough. Maybe that's how David wishes he was?" The first author's developing hypothesis that David's inflated confidence was a coping

mechanism appeared plausible, given the strong, idealized self-image drawing and the suggestion of underlying insecurity, inadequacy, and the self-esteem issues about which his father was concerned.

One week later, David completed the Rorschach Inkblot Method (Exner, 2003). The Rorschach was administered and scored using the Comprehensive System (CS; Exner, 2001). The CS scores are followed in parentheses by the means and standard deviations from the international combined child and adolescent reference sample (Meyer, Erdberg, & Shaffer, 2007). David's 32-response protocol (22.71, 8.09), 10 more than is typical, indicates he might have pushed himself to give more responses to show his compliance. His Weighted Sum of Special Scores of 43 (7.09, 7.82 [these scores were found to be unstable across the 19 samples in the Meyer, Erdberg, & Schaffer study]) and his imbalanced active-to-passive movement ratio of 11:0 (3.49, 3.23: 2.21, 2.16) indicates that his ideation is somewhat inflexible (Weiner, 2003). David has an inflated sense of self importance and is preoccupied with his own needs at the expense of attention to the needs of others (Weiner), as evidenced by four reflection responses (Fr+rF: 0.19, 0.59). However, David's self-centered personality style is not rigidly entrenched. The presence of a Vista response (0.00, 0.06) and a Morbid response (0.72, 1.24) suggest that David's self-regard, the specific aspects and actions he likes or dislikes about himself, is fairly negative and that he might be more self-critical than usual (Weiner). Negative self-appraisals, in conjunction with grandiosity, suggest that David is preoccupied with his shortcomings. Similarly, David might appear self-centered to others, which contributes to poor interpersonal relationships. This assertion is supported by an unbalanced ratio of good human responses to poor human responses of 4 : 8 (2.48, 1.85 : 3.01, 2.59), which indicates that David has a tendency to approach others in undesirable ways. David's three Texture (0.00, 0.07) responses suggest that others might experience him as being needy. The complete Rorschach Structural Summary can be found in Appendix A.

The Bender Visual Motor Gestalt Test (Hutt & Briskin, 1960) was also administered in the hope of obtaining information regarding David's approach to schoolwork. David rapidly drew the figures with little planning or attention to detail. In total, he completed the 10 figures in less than 4 min, including redrawing the last figure. When asked by the first author for a self-appraisal of his work, David glanced at the cards momentarily, and then at his drawings, then said, "Good," with a large grin on his face.

In the observation room shortly after, Scott looked very surprised as he examined his son's work on the Bender. He said, "These really aren't that good. I wonder why David thought he did well?" The first author asked what he thought about David's approach to the task. Scott replied, "Well, it sure didn't seem to take him very long to do it, and it shows in the drawings." The first author then posited that David might rush through his schoolwork, incorrectly assuming he had done well. Scott accepted this assertion and remarked, "It seems like David might rush through his work because he feels as though he doesn't need to put forth much effort to succeed." The first author agreed and added, "He also seems to compare himself to his classmates and if he's the first one done, he feels good about himself." Scott seemed receptive to this alternative way of understanding his son's behavior in school.

### *David's Family Session*

The development of the family session (Tharinger, Finn, Austin, et al., 2008), is informed by the test results and a theory-driven systemic case conceptualization. David's frustrations appeared to be precipitated by the dichotomy between his father's messages and the contradictory ones he received from his teacher and peers. Researchers in social psychology have consistently found that expectation affects outcome. However, there is little agreement about the direction of this effect (McNulty & Karney, 2004). According to the poet Alexander Pope (1737, letter to Fortescue), expectations of any kind leave people vulnerable to disappointment, should they fail to be met. Scott's high expectations of his son could have led to improved academic performance, but David's failure to meet his father's high expectations probably affected his performance and self-esteem. This formulation suggests that developing more realistic expectations might be motivating, rather than a source of shame for David.

From a self-psychology perspective, Kohut (1971) believed that narcissistic character structure stems from a desperate fear of losing a love object, which has yet to be experienced as separate and independent from the self. For David, his father was the love object whose expectations of intelligence and success were hopelessly intertwined with his sense of self. Thus, disappointing his father might mean losing the needed supplier of self-esteem (Kohut, 1971). Conversely, David's father's self-esteem also seemed to be embedded within his son's intelligence and achievement, meaning these aspects of David were both needed by Scott and by David to maintain a connection between them defined by mutual confirmation and narcissistic sustenance. We (the first and third authors) believed that Scott's high expectations and his tendency to rationalize and justify David's struggles perpetuated this dynamic. Addressing issues related to this dyadic pattern was thought to be crucial to the success of the family session.

One of the most difficult aspects of family sessions is designing a task or activity that results in the desired outcomes. The brief, time-limited nature of TA-C necessitates a well-planned, purposeful approach, in which a family session encompassing all of the child's and family's problems is not only typically unfeasible, but might even be undesirable. In this case, two particular test results accurately illustrated David's problems and provided the basis for the family session: David's male figure drawing was in stark contrast to his slight physical stature and seemed to reflect exaggerated confidence and expectations. Second, results of the Bender were quite poor, which was likely due to David's rushed approach to the task. We utilized both of these tests during the family session to achieve the session's goals, which were congruent with Scott's assessment questions and the case conceptualization.

At the beginning of the family session, the first author met with Scott to prepare and enlist his assistance in the session. Scott was told that the focus of the session was to help him and David work through systemic issues that have contributed to the problems reflected in his assessment questions. The first author presented Scott with the computer-generated table of results from David's WISC-IV scores, to provide a realistic picture of his son's abilities. The first author was somewhat concerned about how Scott would receive this news, given his high expectations. Scott immediately noticed the qualitative descriptions

on the WISC-IV computer scored printout, which indicated that all the Index scores were in the average range. After a moment, he said, "Hmmm, I guess I've been telling him the wrong thing, haven't I?" His voice dropped as he finished the question, appearing fearful that the clinician would confirm that his words and actions had caused David's difficulties. Scott said, "I just wanted to make him feel better." He seemed genuinely at a loss for how he could have handled things differently. The first author assured Scott that the situation was repairable. Scott was also informed that he and the first author would reveal to David his intelligence scores on the WISC-IV at the beginning of the session. Scott seemed apprehensive about doing so, but he was agreeable. The first author then described the planned task and Scott's proposed role in the exercise. Scott reported being eager to assist in any way that could be helpful to his son. David was then brought into the room and sat with his father and the first author.

The first author stated, "Today we're going to do something a little different. Your father is going to be in the room with us, and help out a bit. Is that okay with you?" David nodded in agreement. "Do you remember the test you took on the first day we met?" the first author asked. David replied with a huge grin, "Yep. The one that tells me how *smart* I am." The first author indicated he was correct, and said, "I want to share the results with you. I've already shown them to your dad." David was then presented with the table of WISC-IV results. We felt that sharing the results in this way was important for two reasons. The first author hoped to model for Scott how to interact with David around a topic that was potentially uncomfortable. Second, we wanted to gently challenge David's defenses in this area and begin to tenderly expose the underlying feelings he attempted to hide. David examined the results and was expectedly somewhat surprised, but it also appeared that he was somewhat relieved. Scott reassured his son that he was pleased with the results, a response that was not only genuine, but also refrained from dismissing the results or qualifying them in some way.

Previous research found that people with egocentric traits often produce figure drawings representing idealized, grandiose self-images, which change as the result of psychotherapy (Hilsenroth, Handler, & Blais, 1996). Building on this finding, the first author anticipated that asking David to "draw the best picture of yourself that you can" would result in a more accurate reflection of his "true" self-image, especially after having been challenged with the WISC-IV results. David finished his drawing and presented it to the first author, who placed it alongside his first male drawing (Figure 1) and said, "Remember this drawing? What differences do you notice?" David commented on the size of the first drawing, especially the arms, and how the second figure somehow looked "better." This exercise seemed to successfully illustrate the dichotomy between David's defensive and genuine self-images.

The next task of the family session utilized the Bender. David's drawings from the previous session were placed in front of him and the first author said, "I was hoping we might be able to take a closer look at this test. I remember that you felt you did well on it, but we think you can do better. Scott, can you take a look at David's drawings and give them a grade?" Scott appeared glad to be involved and he compared the drawings to the cards, assigning a standard letter grade to each figure. He gave David a C overall and no grade higher than a B on any figure, which was very accurate in the first author's opinion.

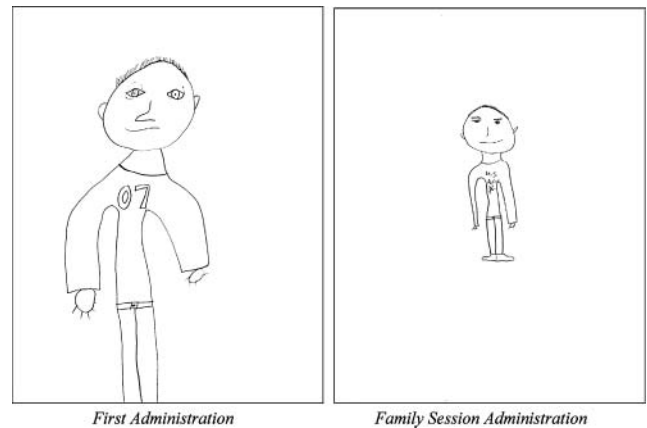


FIGURE 1.—Comparison of David's male figure drawings. *Note.* The text on the shirt of the second drawing reads, "U.S. Air Force."

David was a little surprised and looked to his father to assuage his anxiety. Instead of his typical justification, Scott encouraged his son: "I know you can do a lot better if you try harder." This was a perfect response from Scott, in that he had laid out a realistic expectation for David's future performance. The first author noted a slight, underlying tone of his expectation for a better result, but it seemed that Scott was more genuine and realistic and was simply attempting to provide encouragement, as opposed to lauding poor performance as he had done in the past. The first author asked, "Would you like to try it again?" David nodded eagerly. He spent more time on this administration (Figure 2). Scott awarded As and Bs and David seemed to understand that he would need to put forth more effort to achieve the level he desired, which was hopefully more realistic as a result of the TA-C.

We would like to note that we do not consider the changes in the Bender drawings from the first to second administration to be the measure of treatment success. Rather, the process by which David was able to produce an improved Bender, and the parallel changes Scott seemed to exhibit during the family session, are believed to indicate a successful intervention. Although both Benders are arguable within age-appropriate limits, David's organization, planning, and figure accuracy, particularly figures A, 1, and 6, appeared to have significantly improved between administrations. Some of this improvement might also have been due to practice effects, but again, the results of the administration itself are not proof of success. Rather, it is the understanding gained from having participated in and

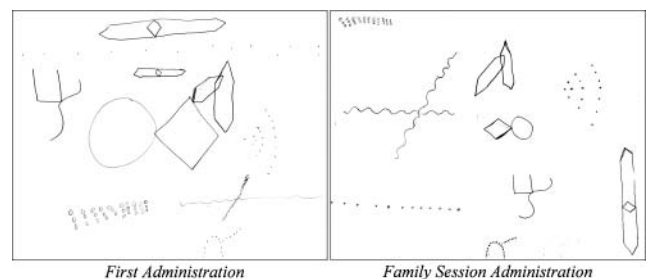


FIGURE 2.—Comparison of David's Bender Visual-Motor Gestalt tests.

experienced the exercise that likely results in long-standing shifts in family dynamics and the way in which the child's problems are understood and managed within the family system.

### *Summary, Discussion, and Fable Sessions*

In accordance with the comprehensive TA-C model, the first author conducted a summary and discussion session with Scott in which the family session, test findings, and assessment questions were discussed at length. David was also presented with a personalized fable about his experiences in the TA-C. (For additional information about fables and personalized stories in TA-C, see Tharinger, Finn, Wilkinson, et al., 2008.) The complete fable written for David appears in Appendix B and demonstrates the way in which complex psychological concepts and phenomena can be presented in a developmentally appropriate manner.

### *Follow-Up Session*

David and Scott returned 60 days later for a follow-up session. David had gone to a summer camp and joined a club to meet peers with similar interests. Scott said, "In the past, David didn't want to go to summer camp because he was afraid of being teased by the other boys." Scott had also taken a more involved approach to David's schoolwork by checking his assignments at home. If David achieved an 80%, his father considered the assignment complete; otherwise David would have to correct his mistakes. When asked about how often he had to correct his assignments now, David replied, "A couple of times a week is all." Scott also commented, "In the beginning, he had to redo a lot of his assignments, but it's beginning to diminish now." Scott also reported that this new approach to schoolwork had a positive effect on his relationship with his son. Their communication had improved as he became comfortable talking with David about topics he would have previously avoided. These reports seemed to indicate that the goals of the family session had been achieved.

## THE CASE-BASED TIME-SERIES EXPERIMENT

### *Procedures*

Case-based time-series methodology has been described as a potentially useful method of tracking clients' improvement in psychotherapy and has been advocated as a means of examining real-world clinical effectiveness, thus bridging the gap between science and practice (e.g., Borckardt et al., 2008; Kazdin, 2008). Smith, Handler, et al. (2010) and Smith et al. (2009) provide detailed descriptions of this methodology in the study of TA-C, and we refer the reader to those sources for additional description of the research procedures used in this study.

Based on the assessment questions, Scott and the first author identified the following metrics during the initial meeting that would be measured daily: (a) overall family distress, (b) David felt good about himself today, and (c) David had positive social interactions today. On the first two items, Scott and David were instructed to come to an agreement between them for each day's ratings, using a Likert-type scale ranging from 1 to 9. Scott was provided with paper tracking sheets and was scheduled to return in 2 weeks so that a baseline period could be obtained prior to the first session with David.

### *Hypotheses*

The aims of this experimental case study are twofold: (a) Test the extent to which changes in the reported daily measures coincided with the onset of TA-C, and (b) examine the potential impact the family session might have had on the course of improvement. We hypothesized that the child and his father would experience significant improvements in the measured areas of functioning after receiving a TA-C, and we predicted that the family session was the point at which a shift in the trajectory of improvement occurred. The second hypothesis received informal support after the TA-C was completed, based on the clinician's impression of the success of the family session and the father's report during the follow-up session, which suggested that the goals of the family session had been achieved.

### *Data Analysis*

Analyses were conducted using Simulation Modeling Analysis (SMA; Borckardt, 2006b) for time-series. SMA is a bootstrapping approach that accounts for autocorrelation, the non-independence of sequential observations inherent in a stream of data. SMA is capable of conducting phase-effect, or level-change analyses, and slope-change analyses. Level-change analyses determine the effect for the observed difference between two specified streams of data. Slope-change analyses determine the strength of the relationship between the reported, dependent variable(s) and an a priori model of the trajectory of improvement. Both analyses are discussed in greater detail in the Results section. Finally, because three nonindependent variables were measured on a daily basis, the highly conservative Bonferroni correction was used to determine the significance of observed effects (Bonferroni, 1935). Using an alpha value of .05, the resultant corrected *p* value is .017 (i.e., 0.05/3).

### *Cautionary Notes Regarding Inference of Causality in Single-Case Experimental Designs*

Although the single-case ABC design involves an experimental manipulation, causality cannot be determined from this research design. The main premise of experimental single-case research is that changes in stable behaviors coinciding with treatment suggest that the intervention might have led to change (Kazdin, 2010). We have included elements in the research design that strengthen the probability that changes can be attributed to the treatment, such as gathering a stable baseline measurement, conducting a specified intervention, and including daily assessment of multiple markers of improvement (e.g., Barlow & Hersen, 1984; Kazdin, 2010). However, due to rival hypotheses and threats to internal validity, causality must be assessed using research designs with greater experimental control.

## RESULTS OF THE TIME-SERIES EXPERIMENT

### *Preliminary Analyses*

A common issue of daily measures time-series designs is cross-correlation (i.e., the extent of similarity between measures as a function of time). Cross-correlation analysis indicated that the variables measured for this case were highly related on a daily basis, suggesting a composite (i.e., mean) score of these indexes is representative of the changes experienced by this family. To address the issue of missing data, the authors used the Expectation-Maximization Procedure (Dempster, Laird, & Rubin, 1977), which was found to yield accurate estimates of

TABLE 1.—Mean scores of phases and phase combinations (1–9 Likert-type scale).

	B	I	F	B+I	I+F	Before Family Session	After Family Session
No. days	14	35	60	49	95	35	74
Composite score mean	7.64	6.54	8.59	6.86	7.86	6.91	8.58

Note. B = Baseline; I = Intervention; F = Follow-Up.

missing values in time-series data streams with up to 40% missing data (Velicer & Colby, 2005). The outcome variables in this case were only missing 7.1% of data. The autocorrelation ( $pAR$  [lag 1]) of the composite variable for the entire data stream was calculated to be 0.682. Smith, Borckardt, et al. (2010) determined that the ability to correctly infer a significant phase effect (i.e., power sensitivity) was sufficient in data streams with autocorrelation estimates below .80. Based on these analyses, we can be reasonably confident in the conclusions drawn from our results.

*Analysis 1: Evidence of the Potential Effectiveness for TA-C*

To examine potential intervention effects, we gathered a 14-day baseline (denoted as B), followed by a 35-day intervention period in which TA-C was conducted (I), and a 60-day follow-up period (F). The chosen contrasts were consistent with the analytic strategy employed by Smith, Handler, et al. (2010), which included three phase-effect contrasts: B vs. I, B+I vs. F, and B vs. I+F. Additional description of this analytic strategy is available in the aforementioned study.

The results indicate that there was no statistically significant change experienced by David and his father during the TA-C, in comparison to baseline (B vs. I, Pearson’s  $r = .416$ ,  $p$  value = .025). On the contrary, the family’s reported functioning actually worsened during the intervention period, although not significantly. Similarly, no significant change occurred when the baseline was compared to the intervention and the follow-up period combined (B vs. I+F,  $r = .059$ ,  $p$  value = .773). Comparing a combination of the baseline and intervention periods with the follow-up indicates that the 2 months following the TA-C were a time of significant improvement (B+I vs. F,  $r = .708$ ,  $p$  value < .001). Improvement during the follow-up period is consistent with the findings of the Smith, Handler, et al. (2010) study and Finn’s (2007) hypothesis that improvement

continues in the months following TA. The mean scores of each period of the study, presented in Table 1 and Figure 3, illustrating the course of the composite daily measure, are helpful in understanding these results in the context of the case presented.

*Analysis 2: Examination of the Family Session’s Relationship to the Trajectory of Improvement*

This analysis was conducted post hoc, with the aim of identifying the way in which the family session might have altered the course of the measured indexes. To explore this issue, we conducted a slope-change analysis. Slope-change analysis in SMA compares the client’s daily reports with an a priori model of change, and determines the strength of the relationship between the two. To address this hypothesis, we compared the slope of the daily reports prior to the family session ( $n = 35$ ) with those occurring after this session ( $n = 74$ ), which is depicted in Figure 3. The results of Analysis 1, and a visual inspection of the graph of daily ratings, suggested a worsening of symptoms during the baseline and early in the TA-C, followed by improvement in the latter stages of the intervention and during the follow-up period. We believe a shift in the course of the measured indexes occurred at the family session. Therefore, our data were tested against the Slope Vector 1 model provided by SMA. The Slope Vector 1 model is an a priori model, which predicts a linear worsening during the first specified period and then a linear improvement in the second period (Borckardt, 2006a). Our data were found to be a strong, significant fit to the a priori model ( $r = .709$ ,  $p$  value < .001).

CONCLUSIONS

This article provides a clinically useful example of the development and execution of a family session in TA-C. We illustrate how to use assessment results, observations, and a theoretically informed case conceptualization to design a task that accomplishes therapeutic goals in regard to the systemic nature of the problem. McNulty and Karney (2004) found that expectations running counter to the facts can be detrimental when one member of the family unit feels that he or she is disappointing another by not meeting the other’s expectations. This situation in David’s family had a profound effect on his self-esteem and self-image, not to mention the secondary effects on his academic performance and social interactions. As Scott’s expectations changed and he began to view David more accurately, David’s self-esteem seemed to improve and he felt more secure in this relationship, leading to more positive peer interactions. In conjunction with the Tharinger et al. (2009) study, the results of this and other case-based time-series studies (Smith, Handler, et al., 2010; Smith et al., 2009) suggest that children and families improve after participating in TA-C. However, change seems to occur somewhat idiosyncratically, following different trajectories in individual cases. Finn (2007) suggested that TA practitioners be mindful of clients’ “tipping points” that could move them toward change. The results of this study suggest that the family session might be one such opportunity to address clients’ tipping

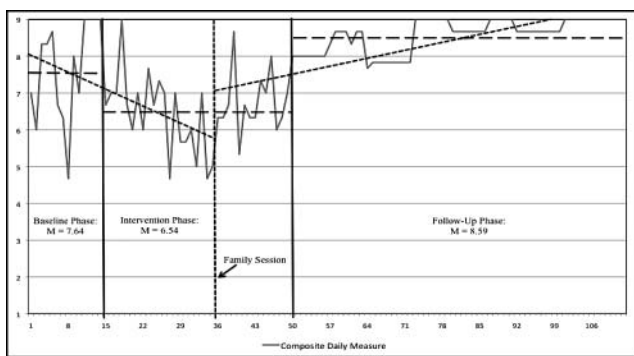


FIGURE 3.—Graph of daily measures composite score with phase means and family session trend lines. Note. Solid vertical lines = phase divisions; short dashed vertical line = family session; long dashed horizontal lines = phase means; short dashed lines = trend lines for pre- and postfamily session. Increases in daily measures indicate improvement.

points in TA–C. The successful family session with David and his father appeared to be related to the statistically significant improvement found in Analysis 1. Further support for this observation, albeit nonexperimental, is provided by the post-hoc slope-change analysis (Analysis 2), suggesting that the family session coincided with a shift in the course of reported symptoms. We hope these findings can inform future TA–C research on differential response and the mechanisms of improvement, which are currently not well understood.

### Limitations and Future Directions

Despite the systemic emphasis on case conceptualization and intervention during the family session, we did not include measures of family or dyadic functioning. The consequences of not being able to include David's mother in the TA–C are unknown. Second, our conceptualization of this case was a psychodynamic systems approach, somewhat similar to that described by Cierpka (2005), which resulted in a specific understanding of the family and related approach to the family session. Clinicians from other orientations might have approached the case much differently. Future studies of TA–C would likely benefit from including daily measures of greater specificity and a broader spectrum of functioning, as these indexes were found to be highly related and likely nonindependent constructs. Future research designs would require greater experimental control to determine treatment efficacy and the potential causal role the family session might have on observed improvement.

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APPENDIX A  
 COMPREHENSIVE SYSTEM 5TH EDITION STRUCTURAL SUMMARY

LOCATION FEATURES	DETERMINANTS			CONTENTS		APPROACH				
	BLENDS		SINGLE							
Zf = 13	Fr.FM	M	= 2	H	= 4	I	:WS.D.Dd			
ZSum = 45.0	Fr.M	FM	= 5	(H)	= 1	II	:W.DdS.W.D			
ZEst = 41.5	M.FY	m	= 0	Hd	= 5	III	:D.D.WS			
		FC	= 2	(Hd)	= 0	IV	:W.D			
W = 10		CF	= 0	Hx	= 4	V	:W.W			
D = 19		C	= 0	A	= 12	VI	:D.D.W			
W+D = 29		Cn	= 0	(A)	= 1	VII	:W			
Dd = 3		FC'	= 0	Ad	= 4	VIII	:W.D.D			
S = 4		C'F	= 0	(Ad)	= 0	IX	:D.D.DdS			
		C'	= 0	An	= 2	X	:D.D.D.D.D.D.D			
		FT	= 3	Art	= 2	SPECIAL SCORES				
DQ		TF	= 0	Ay	= 1					
+ = 6		T	= 0	Bl	= 0	DV = 2	Lv1	Lv2		
o = 25		FV	= 1	Bt	= 0	INC = 3	x1	1x2		
v/+ = 0		VF	= 0	Cg	= 1	DR = 1	x2	1x4		
v = 1		V	= 0	Cl	= 0	FAB = 0	x3	1x6		
		FY	= 1	Ex	= 0	ALOG = 4	x4	0x7		
		YF	= 0	Fd	= 1	CON = 0	x5			
		Y	= 0	Fi	= 0	Raw Sum6	= 13			
		Fr	= 2	Ge	= 0	Wgtd Sum6	= 43			
		rF	= 0	Hh	= 0	AB = 0	GHR = 4			
		FD	= 15	Ls	= 0	AG = 1	PHR = 8			
		F	= 13	Na	= 3	COP = 3	MOR = 1			
		(2)	= 9	Sc	= 2	CP = 0	PER = 0			
				Sx	= 0		PSV = 0			
				Xy	= 0					
				Id	= 0					

..... RATIOS, PERCENTAGES, AND DERIVATIONS .....  
 R = 32 L = 6.8 FC:CF+C = 2.0 COP = 3 AG = 1  
 Pure C = 0 GHR:PHR = 4:8  
 FB = 4:1.0 EA = 5.0 EBPer = 4.0 SmC'WSmC = 0:1.0 a:p = 10:0  
 eb = 6:6 es = 12 D = -2 Afr = 0.78 Food = 1  
 Adj es = 11 Adj D = -2 S = 4 SumT = 3  
 Blends/R = 3:32 Human Cont = 10

FM = 6	SumC = 0	SumT = 3	Cp = 0	PureH = 4
m = 0	SumV = 1	SumY = 2		PER = 0
a:p = 10:0	Sum6 = 13	XA% = 0.66	Zf = 13	Isol Indx = 0.19
Ma:Mp = 4:0	Lv2 = 3	WDA% = 0.69	W:D:Dd = 10:19:3	3r+(2)/R = 0.66
2AB+Art+Ay = 3	WSum6 = 43	X-% = 0.34	W:M = 10:1	Fr + rF = 4
MOR = 1	M- = 1	S- = 2	Zd = +3.5	SumV = 1
	Mnone = 0	P = 5	PSV = 0	FD = 0
		X+% = 0.47	DQ+ = 6	An + Xy = 2
		Xu% = 0.19	DQv = 1	MOR = 1
				H:(H)+Hd+(Hd) = 4:6

PTI = 3 DEPI = 3 CDI = 3 S-CON = N/A HVI = No OBS = No

APPENDIX B

AARON THE GOLDEN EAGLE: A STORY FOR DAVID

Once upon a time, there was a young golden eagle named Aaron. When Aaron was born, he lived with his parents and his sister high atop a rocky cliff where they could see the bountiful forest and lakes below. Aaron was a happy little eagle and he enjoyed going to eagle school where he learned how to hunt for mice and dive for fish in the rivers. He didn't always like eagle school, though. Sometimes the other eagles were mean to Aaron. They called him mean names and told him he wasn't very smart.

Aaron knew a lot of things about the world that the other eagles didn't know and he felt that this meant he was smarter than them. When he first went to school, he got the best grades in his class, but then the lessons started to get harder and he wasn't able to get the highest grades anymore. He tried to appear smart to his classmates by finishing his lessons the fastest. But he made many mistakes, and his instructor didn't give him very good grades. Aaron didn't understand why he was getting these bad scores. The lessons at eagle school had always been so easy for him, but now he was struggling.

Other things weren't going well for Aaron at eagle school either. The other eagles picked on him and called him names



all the time. Aaron felt bad about himself because of this. He couldn't understand why they were so mean to him. He also really liked a girl eagle in his class and they would sometimes talk when none of the other eagles were around. She was nice to him when they were alone, but she was very mean to him when the other eagles were there. He liked her very much but couldn't understand why she would be mean to him.

Aaron's mom and dad began to worry about him when his grades declined. They were also concerned about how the other eagles were mean to him at school and how he might feel because of it. They tried to make him feel better by telling him he was very smart and special, which helped Aaron feel a little better. But his grades didn't improve and he felt bad because he was disappointing his parents.

Aaron's father wasn't sure what to do differently to help his son, so he decided to meet with a wise owl that lived nearby and was known to be able to help eagle families. Aaron and his father met with the wise owl many times and did many different things together: They drew pictures, told stories, and looked at inkblots. The wise owl discovered that Aaron was indeed a smart eagle and was capable of succeeding in school, but Aaron would need to put forth greater effort to get the grades he wanted. The wise owl tried to show Aaron that he could do so much better if he slowed down and concentrated more, rather than rushing through his work the way he often did. Aaron saw that this was true. He now understood that he would have to work harder and couldn't rely solely on his natural ability anymore.

The wise owl also discovered that having a hard time in school was difficult for Aaron because not doing well makes him feel like he is not smart. Sometimes when Aaron is feeling this way,

he does things that he hopes will make others see him as a smart eagle so that he can feel better about himself. This might work for a little while, but eventually he always ends up feeling bad again and doesn't know what to do about it.

The wise owl thought he might know why the other eagles were not very nice to Aaron. He told Aaron that because he was interested in many things that the other eagles weren't, the other eagles might find it hard to connect with him. Aaron really wanted to make friends and was very frustrated that it had been so hard. He wants very badly to fit in and be a part of the group. Aaron is very concerned about how he appears to the other eagles and has a hard time feeling good about himself when he isn't included. Aaron knows he is smart and that he is a good person, but the other eagles don't seem to notice this in him sometimes. He is very hurt by not having friends who value his intelligence.

The wise owl now understands Aaron's problems and he has told Aaron's father how he can help him to feel better about himself and do better in school. Aaron also has learned that he needs to put in more effort in school to do well. He has also learned that he can do things differently around the other eagles so that they won't pick on him and call him names so much. He also now knows that it is okay to make mistakes and learn from them to do better the next time.

The wise owl wanted Aaron and his father to know that he very much enjoyed getting to know them. The wise owl hopes that they will be able to take the things they have learned and use them to make things better in the future. The story of Aaron the golden eagle is really just beginning. It is now up to him to write the rest of the story. How will it turn out?