

American Journal of Orthopsychiatry

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Online First Publication, January 22, 2018. <http://dx.doi.org/10.1037/ort0000296>

CITATION

Murray, M. E., Khoury, D. Y., Farmer, E. M. Z., & Burns, B. J. (2018, January 22). Is More Better? Examining Whether Enhanced Consultation/Coaching Improves Implementation. *American Journal of Orthopsychiatry*. Advance online publication. <http://dx.doi.org/10.1037/ort0000296>

Is More Better? Examining Whether Enhanced Consultation/Coaching Improves Implementation

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It is extremely challenging to implement evidence-based interventions in community-based agencies with sufficient quality, fidelity, and intensity to produce desired changes in practice and outcomes. This is particularly difficult to do within the confines of existing service providers' time, personnel, and resource constraints. Over the past 15 years, Together Facing the Challenge (TFTC) has been developed, tested, and disseminated in an effort to address this set of issues to improve treatment foster care (TFC). Data from the initial randomized trial showed improved practice and outcomes in TFTC compared to usual TFC. These initial results came from study-led training and follow-up consultation. Subsequent dissemination activities suggested potential need for more intensive support for TFTC supervisors to produce more consistent and sustained implementation of the model. The current randomized trial extends this work by comparing the previously tested standard consultation versus enhanced consultation that incorporated more of a coaching approach. Initial results suggest that enhanced coaching/consultation was associated with improvements in the small- to medium-effect size range. Results are promising, but require additional work to more fully understand how and whether to enhance supports as agencies implement new evidence-based approaches.

Public Policy Relevance Statement

There is a tremendous need to learn how to effectively and efficiently implement evidence-based approaches for youth with serious mental health and behavioral problems. This article examines whether additional consultation using a coaching-focused approach helps treatment foster care agencies more successfully implement an evidence-informed approach to treatment, Together Facing the Challenge (TFTC). Results suggest that providing more coaching/consultation produces consistent small-to-medium positive effects on a range of implementation outcomes.

Delivering evidence-based interventions in everyday practice is a challenge (Aarons, Hurlburt, & Horwitz, 2011; Schoenwald & Hoagwood, 2001). There are many factors that influence whether particular practitioners,

serving particular clients, in particular settings, surrounded by particular contexts will be able to effectively implement interventions as specified (Aarons et al., 2011; Fixsen, Blase, Naoom, & Wallace, 2009; Herschell et al., 2015; Kazak et al., 2010). Available evidence suggests that it is critical to provide leadership and infrastructure that can support desired implementation, work with providers who are receptive to new approaches, and provide training and ongoing supports to help providers learn and deliver the desired intervention (e.g., Beidas, Edmunds, Marcus, & Kendall, 2012; Brimhall et al., 2016; Fixsen et al., 2009; Novins, Green, Legha, & Aarons, 2013; Welsh & Greenwood, 2015). The current paper reports on efforts to increase quality of implementation of an evidence-based approach in treatment foster care (TFC)—Together Facing the Challenge (TFTC)—by increasing coaching/consultation during the initial implementation year.

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This research was supported in part by a grant from the Duke Endowment.

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Factors Related to Successful Implementation

There has been a great deal of work in recent years around ways to improve implementation of evidence-based treatments (e.g., Aarons et al., 2011; Burns & Hoagwood, 2002; Damschroder et al., 2009; Fixsen et al., 2009; Glisson & Schoenwald, 2005; Mendel, Meredith, Schoenbaum, Sherbourne, & Wells, 2008; Schoenwald & Hoagwood, 2001). Across these pieces, there has been a consistent message that there is no “silver bullet” that will lead to successful implementation. Rather there is a need to develop interventions, cultivate attitudes, corral resources, provide leadership, increase knowledge and skills, and support efforts that cut across agencies, providers, and systems (Buchanan, Chamberlain, Price, & Sprengelmeyer, 2013; Chamberlain et al., 2012; Kazak et al., 2010; Kolko, Hoagwood, & Springgate, 2010; Welsh & Greenwood, 2015).

Within this broad literature on factors that potentially influence implementation, recent work has shed light on factors related to how practitioners are trained and supported that may increase successful implementation. These include factors related to the training itself (e.g., design, delivery, approaches), agency support and enthusiasm for the new intervention, and specific supports in the initial implementation period to help practitioners learn and routinely use the new approaches (Aarons et al., 2011; Buchanan et al., 2013; Herschell et al., 2015; McHugh & Barlow, 2010; Novins et al., 2013).

Advances in knowledge about adult learning and effective uses of pedagogy and technology in trainings have provided insights about how to get and keep participants involved and excited (e.g., Aarons & Palinkas, 2007; Fixsen et al., 2005; McHugh & Barlow, 2010; Novins et al., 2013). There is also emerging consensus that an organizational environment and leadership that values evidence, data, and innovation are important for supporting implementation of new evidence-based interventions (e.g., Brimhall et al., 2016; Fixsen et al., 2005; Kolko et al., 2010; Welsh & Greenwood, 2015). This infrastructural support and championing of the intervention provide a framework within which other factors have the opportunity to make an impact.

Whereas enthusiasm and interest in a new approach facilitate the process of introducing new intervention approaches, it is critical that practitioners and their supervisors have the knowledge and skills to understand the intervention and implement key components. In the contemporary world, there is widespread belief that workshops and other intensive out-of-context trainings may help to increase knowledge, but are unlikely to be sufficient to actually change behavior (Beidas & Kendall, 2010; Herschell, Kolko, Baumann, & Davis, 2010; Rakovshik & McManus, 2010).

In particular, there is growing evidence for the importance of in vivo and ongoing coaching and support as practitioners are trying to adopt new practices (e.g., Beidas et al., 2012; Herschell et al., 2010; Nadeem, Gleacher, & Beidas, 2013; Schoenwald, Sheidow, & Letourneau, 2004). Such coaching, when done well, allows for additional skill development, knowledge transfer, performance feedback, practice in problem solving, assistance with individual cases, and so forth. Studies across a range of interventions have shown that training sessions followed by supportive consultation and/or coaching substantially improved practice and outcomes (e.g., Beidas et al., 2012; Rakovshik & McManus, 2010; Schoenwald et al., 2004).

TFTC was built from a foundation in these various literatures. Its initial development incorporated knowledge from both the empirical literature and usual care practice (Hoagwood, Burns, & Weisz, 2002); recruitment of participating agencies began with extensive relationship building with administrators, program directors, and supervisors to obtain buy-in and address underlying concerns; trainings included didactic and interactive (e.g., role playing, discussions, problem solving) aspects within the initial training sessions; and follow-up consultation was viewed as an integral part of the process for moving toward implementation. The challenge at this point in the development of the field is to move beyond identification of key elements or approaches to more nuanced studies that explore variations within these factors to guide implementation efforts.

Background to Together Facing the Challenge

TFTC was created to provide an accessible (i.e., low cost, low resource, flexible) approach to improving TFC for a wide variety of agencies and settings. It was developed via a multistage process, working with existing TFC agencies, to examine what they were currently doing, what “worked,” and what gaps existed in their approach (Farmer, Burns, Wagner, Murray, & Southerland, 2010; Murray, Southerland, Farmer, & Ballentine, 2010). Initial work showed that TFC, delivered under “usual care” conditions, was generally in line with both national standards of quality (FFTA, 2013) and some aspects of the only previous evidence-based model of TFC (Treatment Foster Care Oregon [TFCO], previously known as Multidimensional Treatment Foster Care [MTFC]; Chamberlain, 2003; Chamberlain, Leve, & DeGarmo, 2007; Chamberlain et al., 2008). However, usual care TFC was much less intensive than either national standards or TFCO/MTFC would recommend, there was tremendous variation in implementation across agencies, and there were key gaps in what was being delivered (Farmer et al., 2002).

These findings provided underpinnings for development of TFTC—a model of training and consultation to improve key elements (particularly systematic proactive behavioral approaches) while also attending to issues that were emergent in the field and data (e.g., inclusion of focus on trauma, self-care for treatment foster parents, focus on long-term planning and preparation for adulthood; (Murray et al., 2007; Murray, Dorsey, Farmer, Burns, & Ballentine 2015; Murray et al., 2010; Murray, Culver, Farmer, Jackson, & Rixon 2014). It was also very clear from data on existing practice in TFC, that agencies were struggling to provide adequate and effective training and supervision to treatment foster parents (Farmer, Wagner, Burns, & Richards, 2003; Murray et al., 2010). Hence, a model of training and ongoing consultation was developed to support agencies in efforts to implement better TFC (Murray et al., 2010).

The resulting model—TFTC—was evaluated via randomized trial (Farmer, Burns, & Murray, 2009; Farmer et al., 2010), with training and monthly follow-up consultation across 12 months delivered by university-employed staff. Results showed that TFTC was associated with improved outcomes for youth (Farmer et al., 2010). Results were particularly strong at 6 months, with diminished (but still significant effects for behaviors) at 12 months. Given the dearth of affordable evidence-informed interventions in TFC, these results created an influx of inquiries from agencies to be trained on TFTC. This set of factors—a randomized trial that

showed promising results, but less sustainability than desired; limited ability during the randomized trial to deliver the level of follow-up consultation that agencies seemed to need; and challenges delivering the university-led training to geographically dispersed agencies—led to a second randomized trial to examine whether the initial model could be improved to increase sustainability and improve implementation. The current article is the initial evaluation of the resulting randomized trial around improving implementation.

The Current Study

The initial randomized trial of TFTC suggested its potential for improving youth outcomes (Farmer et al., 2010). The current paper focuses on a second randomized trial that was designed to increase knowledge about how to work with agencies to effectively implement this new approach. In the initial study, all training of treatment parents was done by university-led trainers (with supplemental support and between-session follow-up by agency supervisors). In an effort to increase in-depth knowledge of the intervention by agency personnel and to facilitate dissemination in locations that were not easily accessible on a weekly basis by the university-based trainers, a train-the-trainer approach was fully implemented in the current study. University-employed trainers worked with each agency's supervisory and administrative team (e.g., TFC supervisors, clinical supervisors, program directors, agency directors) to develop local agency-based training capacity. Fidelity of training was molded and monitored via practice sessions during initial training and observation/feedback during each agency's initial round of trainings with their treatment parents. This approach was used in both arms of the current study; hence, agency-led training of treatment parents was a constant in the current study.

In the initial study, after completing training, supervisors and other agency administrators (clinical supervisors, program directors, etc.) participated in once-a-month group consultation visits/calls with the study's intervention coordinator. Self-assessment of this process raised concerns that 12 months of once-a-month consultation in the initial randomized trial was not sufficient to provide adequate support for supervisors as they worked with treatment foster parents to implement TFTC. However, discussions with agencies suggested that conducting more frequent consultation calls/visits was challenging in many agencies (lack of time for additional group meetings, supervisors scattered over a wide geographic area, high case loads for supervisors). Hence, it seemed important to explore whether more frequent and more intense consultation actually results in better implementation and outcomes before recommending that agencies expend additional resources and time to provide a higher level of support.

Therefore, the current randomized trial assigned half of the agencies to the "usual consultation" (control) and half to the "enhanced consultation" (intervention) arm. In the usual consultation arm of the study, supervisors received once-a-month group consultation visits/calls with an agenda built upon agency-raised questions and issues, as they had in the initial randomized trial. In the intervention arm, consultation was expanded to include a more intensive coaching approach. In this arm of the randomized trial, the TFTC trainer held group consultation visits/calls with supervisors twice a month, accompanied each individual supervisor on

2–3 home visits to treatment parents' homes to observe and audiotape interactions so that these could be used to provide feedback/coaching around supervisory practice during the next consultation, and worked with supervisors to be more systematic in their work with treatment parents. Consultation sessions in the enhanced condition used much more structured and strategic approaches, in which the consultant provided more coaching via interactive and structured learning activities and feedback based on audiotapes from in-home observations. Consultation sessions were organized around a predetermined agenda, focused on improving understanding and mastery of key TFTC concepts and skills. See Figure 1 for a comparison of the study's arms.

The current article, therefore, examines whether implementation of TFTC is improved by more frequent, structured, and intensive consultation and coaching as the agency conducted its first year of implementation. Hence, this work moves beyond the question of whether we can change practice and outcomes, to examine how such improvements might be supported and whether additional resources to augment consultation as agencies are trying to implement the new approach are worth the effort.

Method

Randomized Trial Design Overview

The focal study was conducted from 2012 through 2015 in six TFC agencies in a Southeastern state. Random assignment was done at the agency level, with three agencies assigned to the control condition ("traditional" TFTC with previously examined levels of consultation), and three agencies assigned the intervention condition ("enhanced" TFTC with expanded consultation/coaching). Agencies were randomized in pairs, based on size and geographic location, with one agency in each pair being assigned to the enhanced condition. Neither the control nor the intervention group was aware of to which arm they had been assigned. All currently employed TFC staff members and treatment foster parents in participating agencies were invited to participate.

Intervention Condition	Control Condition
1. Received two group consultations per month	1. Received one group consultation per month
2. Consultation meetings were structured, agenda was more consultant-led around key learning objectives, more focused learning activities (e.g., role plays, case presentations), included group-based constructive feedback on practice	2. Consultation meetings focused on questions raised by agency staff
3. Strategic Home Visit Guide was required to be used during family sessions	3. Strategic Home Visit Guide was optional for agencies
4. Strategic Home Visit Guides collected by consultant for review and feedback (written feedback to individual; group feedback in consultation sessions)	4. Data not collected on Strategic Home Visit Guide
5. In-home observations conducted, audiotaped, and later used during group consultation sessions to enhance fidelity (3 per case-worker).	5. In-home observations were not conducted

Figure 1. Comparison of enhanced (intervention) and traditional (control) arms of TFTC.

Description of Intervention

Agency staff at all participating sites received a 3-day train-the-trainer workshop on TFTC, using a previously developed protocol (Murray et al., 2010). Staff in this designation included employees who directly supervised treatment foster parents (referred to here as *TFC Supervisors*) as well as higher level administrators (e.g., clinical supervisors, program directors, agency director).

Agency staff then trained the agency's treatment parents in TFTC. Treatment parents in all participating sites (intervention and control) received approximately 12 hours of group-based structured training delivered by the agency's staff, using the TFTC training toolkit (Murray et al., 2010). Supervisors in both arms of the study were responsible for providing supervision and support to the treatment foster parents in their agencies. Frequency of meetings between supervisors and their treatment parents were not mandated by study protocol, so each supervisor followed state- and agency-level guidelines and their own professional approach to determine how often they met with and/or communicated with their assigned treatment parents.

Follow-up consultation was provided for 12 months following training for both intervention and control agencies. For control (i.e., traditional consultation) agencies, follow-up consultation included monthly group sessions during which TFTC trainer(s) met with supervisors and other agency administrative staff, as described above and was been done in the initial randomized trial. For agencies randomized to the intervention arm (i.e., enhanced consultation/coaching), consultation was increased to twice per month; included more structured sessions around specific topics, issues, and approaches; included more formal utilization of case-based examples into session content and discussions; and included audiotaped segments from in-home observations of supervisors working with their treatment parents to provide opportunities for input and feedback to supervisors on their interactions with treatment parents. In both conditions, all consultation included supervisors and administrative staff.

All supervisors were also introduced to a standardized form that was developed during the initial randomized trial of TFTC to guide their supervision sessions with treatment parents. This form, the Strategic Home Visit Guide, provided a consistent format and reminders for supervisors to use to help them implement TFTC principles and approaches by giving them a structured reminder to emphasize things that were going well, address current problems, and develop specific intervention and follow-up plans to provide both structure and consistency across time for supervisors' work with their treatment foster families. While all supervisors were encouraged to utilize this form with their treatment parents, it was required and systematically used in coaching/consultation sessions with supervisors in the intervention arm of the study to provide more detailed feedback.

Overall, TFC supervisors in both arms of the study were trained in TFTC and delivered training to their agency's treatment parents in the model. Supervisors were then responsible for working with treatment parents as they implemented TFTC with youth in their homes. The primary difference between the two arms of the study was that the intervention arm (enhanced coaching/supervision) included more frequent group consultation meetings, more structured and strategic use of learning approaches with supervisors, and more practice-based feedback and coaching. Figure 1 provides a

comparison of the consultants' role in working with TFC supervisors in both conditions. As this figure illustrates, the differences between the intervention and control arms included both approach and activities. In the enhanced arm, group consultations were more structured with a preset agenda that included a variety of interactive and feedback-oriented approaches (e.g., case presentations, review of in-home tapes, role play) that were based on specific key elements of TFTC and drawn from in-home observations. Feedback from in-home observations was provided in written comments to the individual supervisor and was used in group consultation as examples to spur group discussions about implementation. In the control condition, the structure was much more idiosyncratic and conversational, with an agency-led agenda based on what staff members perceived to be the accomplishments and challenges of the previous month.

Sample Characteristics

All participating agencies were private nonprofit agencies, state licensed, and COA (Council on Accreditation) accredited. The participating agencies had been providing TFC services from 12–20 years, and all provided TFC as one service within a broader range of offerings (e.g., group homes, outpatient, intensive in-home). The number of licensed homes and youth served ranged across agencies from 20 to 76. There were no significant differences between intervention and control agencies on any measured agency-level factors.

Characteristics of the sample are shown in Table 1. Treatment parents were eligible for the study if they had a youth placed in their home during the study period ($n = 140$; 91% of eligible treatment parents participated). Of this total sample, 88 (63%) retained the same youth in their home by the 6- and/or 12-month follow-up interview(s). Based on the longitudinal nature of the focal questions, these 88 treatment parents (47 intervention; 41 control) constitute the sample for current analyses. They had a mean age of approximately 50, 78% were African American, and 96% of those who defined themselves as the "primary treatment parent" in the home were female. They were a fairly educated group, with 76% having completed some education beyond high school. There were no significant differences on any of these

Table 1. Baseline Characteristics of Sample

Variable	Treatment parents ($n = 88$)		Supervisors ($n = 38$)		Youth ($n = 88$)	
	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
Age (<i>M</i> , <i>SD</i>)	49.6 (8.9)		34.9 (8.5)		12.6 (3.4)	
Race						
African American	68	78.2	24	63.2	50	56.8
Caucasian	17	19.5	11	28.9	27	30.1
Other	2	2.3	3	7.9	11	12.5
Female	84	95.5	26	68.4	39	44.3
Educational level						
High school	21	23.8	0	0		
Some college	23	26.1	1	2.6		
Bachelor's degree	25	28.4	25	65.8		
Grad/prof degree	19	21.6	12	31.6		

factors between the full ($n = 140$) and longitudinal ($n = 88$) samples or between treatment parents in the two arms of the study.

TFC Supervisors ($n = 38$) were also demographically similar across conditions. Supervisors were, on average, younger (mean of 35 years) than the treatment parents whom they supervised. A majority (68%) was female, and 63% were African American. Nearly all supervisors had a college degree (97%), and 32% held a graduate degree.

Although youth were not interviewed for this study, treatment foster parents provided demographic information about the TFC youth who was living in their homes at the start of their participation. Youth were, on average, early adolescents ($M = 12.6$, $SD = 3.4$) and 44% were female. Approximately 70% of youth were from racial/ethnic minorities (predominantly African American).

Measures

Data were collected at baseline (prior to training), 6 months, and 12 months from treatment parents and TFC supervisors. Given the focus on key elements of the intervention process as well as issues related to treatment parents' approaches and interactions with both youth in their care and their supervisors, the study collected a wide range of measures. For current analyses, focal baseline measures include demographics and attitudes toward evidence-based practice. Outcome measures focus on quality of the relationship between TFC supervisors and their treatment parents as well as broader measures of treatment parents' performance and implementation. These latter measures include treatment parents' utilization of TFC principles, approaches to addressing problematic behaviors, and quality of the relationship between treatment parents and youth. In the broader conceptual model that underlies this study, these factors are viewed as process-focused mediators that are hypothesized to impact youth outcomes (see Figure 2 for overview of broader study's conceptual model).

Evidence-Based Practice Attitude Scale (EBPAS).

The EBPAS assesses attitudes toward the adoption of evidence-

based practices (Aarons, 2004). It includes a total score, as well as scores for four subscales: intuitive appeal of evidence-based practices, perceived divergence of usual practice with evidence-based practices, openness to novel practices, and the likelihood of enacting evidence-based practices if required (Aarons, 2004). Composite scores for both total score and subscales are calculated as a mean (range = 1–4) with higher scores indicating more positive views of evidence-based practices. The EBPAS exhibits acceptable psychometrics and factor structure (Aarons et al., 2010; Aarons, McDonald, Sheehan, & Walrath-Greene, 2007). Available data from previous studies suggest typical mean total scores of approximately 2.3–2.7 for mental health, child welfare, and medical professionals (Aarons, 2004; Aarons & Sommerfeld, 2012; Aarons et al., 2010; Melas, Zampetakis, Dimopoulou, & Moustakis, 2012).

Training and Supervisor Questionnaire. This is a study-developed instrument, consisting of 10 items, to assess treatment parents' views of the quality and type of relationship with their TFC supervisor. Included items inquire about quantity and type of meetings, as well as treatment parent perceptions of the quality and usefulness of their relationship with their supervisor. Each item was included individually; there was no composite score. Frequency responses were recorded as times per month. Treatment parents rated their satisfaction with their supervisor on a 5-point scale (from 1 = *very poor* to 5 = *very good*).

Project KEEP. Discipline approaches were assessed using a subset of questions from Project KEEP (Price, Chamberlain, Landsverk, & Reid, 2009). These assess the disciplinary approaches treatment parents report using (e.g., time out, privilege removal, talk/discussion, grounding, restraint). Data were collected on overall frequency of discipline as well as use/frequency of each particular approach (from 1 = *less than once per month* to 6 = *3 or more times per day*).

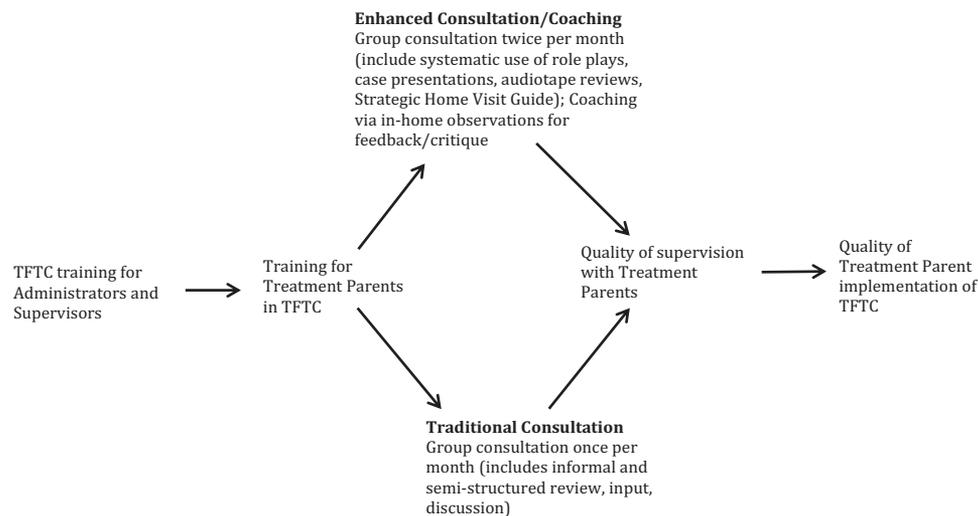


Figure 2. Conceptual model of enhanced TFC randomized trial.

Supervisor Assessment of Treatment Parents.

This is a study-developed measure on which agency staff provided data about the type and frequency of contact they had with the treatment parents they were supervising. They were also asked to assess the extent to which the treatment parents adopted the intervention principles included in TFTC. Specifically, these included questions around the extent to which the treatment parents understood and used the interventions and the extent to which these interventions have been effective for working with the child(ren) placed in their home.

Trusting Relationships Questionnaire (TRQ). The TRQ is a 14-item measure designed to assess quality of the relationship between youth and their caregivers (Mustillo, Dorsey, & Farmer, 2005). Current data come from treatment parents to assess their view of the relationship with their current foster child. The TRQ is a composite mean of included items and has potential scores of 1 through 4, with higher scores indicating better relationship quality. The TRQ has adequate psychometrics (Mustillo et al., 2005).

Procedures

Data were collected at baseline, 6 months, and 12 months from treatment parents and their TFC supervisors. The EBPAS was collected in paper form at the beginning of TFTC training from all participating treatment foster parents and staff members in both arms of the study. All data collection procedures and instruments were approved by the university Institutional Review Board.

Analysis

Analyses consisted of a variety of descriptive, bivariate, and multivariate approaches. These included cross-sectional comparisons between intervention and control groups, as well as longitudinal analyses of change across time (between groups and within groups). Analysis focused on treatment parents who had the same youth in their home across waves. Therefore, available longitudinal data was limited by youths' lengths of stay in the home, not by attrition from data collection across waves. For outcome analyses, data were drawn from the "last available" data point for each participating treatment foster parent. For 12% of included treatment parents, data were available for a 12-month follow up. For the other 88%, data were only available across a 6-month follow-up period. Distribution of length of follow-up did not vary significantly by study arm ($\chi^2 = .58, p = .75$). Hence, all outcome-focused analyses used the longest possible data for each respondent. Given small sample sizes and short timeframe for changes to occur, significant findings at $p < .1$ are reported and effect sizes are included, to minimize risks of prematurely ignoring potentially relevant findings. These restrictions also restricted the types of multivariate and longitudinal analyses that could be conducted. Multivariate models were run (including baseline characteristics of treatment parents and youth, interval between baseline and last-available, attempting to model mediation, and including agency as a variable to account for nesting). Inclusion of these additional factors did not alter the pattern of results or conclusions conveyed by cross-sectional analyses of last-available data. There-

fore, to simplify presentation, results focus on cross-sectional group comparisons based on last-available data.

Results

Treatment parents and supervisors in the two arms of the randomized trial did not differ from each other on demographic or baseline characteristics. Because the study focused on implementation of a new approach to treatment, staff and treatment parents in the intervention and control conditions were also compared on their openness to evidence-based treatments. EBPAS data were collected from staff and parents only at baseline. There were no significant differences between treatment parents in the two arms of the study (intervention = 3.0 [0.49]; control = 3.1 [0.49]). Staff members in intervention agencies showed slightly higher receptivity than staff in control agencies (3.3 [0.45] vs. 3.1 [0.42], $p = .07$).

Analyses of last-available data from treatment parents and supervisors suggest two areas of significant difference between the intervention and control groups. Treatment parents in the intervention group reported that they had more contact with their supervisor than their control group peers did ($p < .05$ for in-person meeting; $p < .1$ for overall communication). Supervisors of treatment parents in the intervention condition reported that these treatment parents had a better understanding of the interventions they were taught to implement than did supervisors of treatment parents in the control group ($p < .01$). Cohen's d for these outcomes showed medium-size effects (.36–.65).

In addition to these significant differences between groups, there was a consistent pattern of slightly (but not significantly) better implementation across nearly all measured domains for treatment parents in the intervention condition. As shown in the lower portion of Table 2, measures of implementation, discipline, and relationship quality all showed small but consistently better outcomes for treatment parents who were exposed to the enhanced (intervention) consultation/coaching approach than those who received traditional consultation. Treatment parents in this arm were viewed, by their supervisors, as being slightly more likely to be using the approaches from TFTC and for these approaches to be effective with their currently placed youth. They also showed an overall, though nonsignificant, increased use of consistent discipline and were using both time-out and privilege removal slightly more often than the control group peers. Finally, treatment parents in the enhanced condition reported slightly (again, not significantly) better relationship quality with the youth in their home. All of these effects would be categorized as "small" using traditional metrics for Cohen's d .

Two included variables showed no differences between groups. Both groups rated their relationship with their supervisor very positively (mean of 4.8 for both groups on a 1–5 scale). And, while differences in behavioral approaches in response to problematic behavior showed small effects in favor of the enhanced group, both groups were equally likely to continue using reasoning and/or discussion as a response to problem behaviors (3.9 vs. 3.9, $p = .86$, Cohen's $d = .09$).

Discussion

This article has reported on findings from a small randomized trial designed to examine whether increased consultation/coaching

Table 2. Differences in Supervision and Treatment Parent Implementation

Variable	Traditional TFC (Control; <i>n</i> = 41)		Enhanced TFC (Intervention; <i>n</i> = 47)		Effect size (Cohen's <i>d</i>)
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Frequency of communication (in past month) between supervisor and treatment parent	8.3	4.6	10.0 ⁺	4.7	.36
Frequency of in-person meetings (in past month) between supervisor and treatment parent	3.6	.7	4.3*	1.7	.51
Supervisor assessment of treatment parents' understand of focal behavioral approaches/interventions	3.6	.8	4.1**	.7	.65
Treatment parent assessment of quality of relationship with supervisor	4.8	.4	4.8	.5	0
Treatment parent-child relationship	3.6	.5	3.7	.5	.17
Treatment parents' assessment of intervention effectiveness	3.4	.8	3.6	.9	.19
Use of disciplinary approaches					
Frequency of time-out	.9	1.4	1.2	1.5	.20
Frequency of any discipline	2.6	1.4	2.9	1.2	.21
Frequency of privilege removal	2.0	1.4	2.4	1.3	.25
Frequency of reasoning/discussion	3.8	1.1	3.9	1.1	.09
Overall use of TFC interventions	3.4	.8	3.7	.7	.28

⁺ Significant at $p < .1$. * Significant at $p < .05$. ** Significant at $p < .01$.

could improve implementation of an evidence-based approach to treatment foster care. All agencies in the study were implementing Together Facing the Challenge (TFTC), which has been shown in a previous randomized trial to produce improved outcomes over “usual care” TFC (Farmer et al., 2010). Therefore, the “bar” was set quite high for the current analyses. Could additional posttraining consultation and coaching with TFC supervisors improve practice by treatment parents, over and above whatever effects training and modest consultation would produce?

Current results suggest potential promise from additional coaching-focused consultation. Supervisors in the enhanced consultation/coaching arm reported that their treatment parents understood the interventions significantly better than those in the traditional consultation arm. And treatment parents in the enhanced arm reported that they were in touch with their supervisors significantly more frequently. Across nearly all other measured domains, the enhanced condition showed small but consistent improvements over traditional consultation.

In terms of a “high bar” for the comparison between conditions, it is interesting to note that, compared to other published findings on various professionals (e.g., Aarons, 2004; Aarons & Sommerfeld, 2012; Aarons et al., 2010; Melas et al., 2012), both treatment parents and staff in the participating agencies showed relatively favorable attitudes toward evidence-based treatment (mean of 3.1 [*SD*, 0.49] for treatment parents; 3.2 [*SD*, 0.44] for staff). While this is a wonderful quality to find in practitioners, it may also have muted differences between the two groups, because both groups may have maximized their opportunities to learn and try new things.

Lack of significant/sizable effects on two variables may provide interesting confirmation of the overall pattern of expected results and seem to confirm the pattern of differences. Satisfaction with supervision did not differ between intervention and control treatment parents. Given that both groups were implementing TFTC, it

is encouraging that treatment parents in both groups rated their relationship with their supervisor very positively (4.8 out of a possible 5.0). It is also interesting that the only approach to discipline that did not show at least a small effect of enhanced consultation was an approach that is not focal in TFTC (reasoning/discussion), whereas more behaviorally oriented and focal discipline approaches were modestly related to enhanced consultation/coaching.

Because both arms were implementing an intervention that has been shown previously to improve practice and outcomes, it is not clear how critical the relatively small changes between the two arms may be. From available data (reported here and collected qualitatively around training and supervision), agencies in both arms of the study implemented TFTC fairly well. Additional coaching/consultation appears to have increased interactions between treatment parents and supervisors and to have improved supervisors' views of how well the treatment parents were implementing interventions. Given that TFTC is designed to provide a new “tool kit” of approaches and skills to supervisors and treatment parents, additional contact and interaction between these key players provides opportunities for increased uptake of the model and shared decision making, problem solving, and treatment planning/monitoring. All of these are viewed as positive directions for improved practice. Improved understanding of the approaches by the treatment parents is also potentially critical in effective implementation. Treatment parents who more fully understand what they are doing and why are more likely to implement approaches appropriately and effectively in the fast-paced decision-making world of TFC. Hence, the preponderance of the evidence suggests that enhanced coaching/consultation may be valuable for improving practice.

As noted previously, this study (and others like it) enact a high bar for finding differences. Studying ways to improve existing evidence-based/evidence-supported interventions requires comparing imple-

mentation of an intervention that is already known to be effective against improvements that may lift the effectiveness to a higher level. This is likely to result in small increases (due to the high levels of success in the comparison condition and ceiling effects in measures). It may require new and more nuanced research and evaluation approaches to conceptualizing and measuring improved implementation. This may include assessing the depth of key personnel's understanding of core concepts, consistency of implementation, developmental appropriateness of interventions, appropriate adaptation for context, and so forth. It also suggests the importance of determining how much improvement is realistic, meaningful, and worth additional effort to achieve. It is quite easy to show effects when the comparison condition is "usual treatment" or some other relatively ineffective approach. When trying to compare competing evidence-based interventions or determining whether existing evidence-based interventions can be improved upon, the standard of proof gets much more difficult. But shying away from these types of comparisons suggests stagnation for evidence-based interventions and loss of critical information about how to most effectively implement interventions in ways that can optimize their potential utility in a wide range of settings and conditions and with diverse groups of staff, youth, and programs.

Limitations

This work provides an initial glimpse into a potentially important topic: how to offer enhanced supports to improve implementation of new interventions. However, it has a number of limitations. First, it was conducted on a small number of agencies over a relatively short period of time. Available data suggest that change takes time, and most participants in the current study were exposed to the focal intervention for only 6 months. Second, the study was clearly underpowered. Power analyses suggest approximately 13–24% power to detect significant differences within this sample and that a sample of nearly 400 youth would be necessary for an adequately powered study with the observed differences between groups. Third, given the incremental nature of the findings, it would be important to assess cost benefit of enhanced coaching/consultation. This was not done systematically in the current study. Consultant time is the primary driver of costs here. Additional consultation calls/visits are relatively low cost (particularly if they are done via phone/electronic connection), but in-home observations clearly require additional consultant time (for the observation itself, as well as for reviewing and providing feedback). Finally, the real focal outcomes for any intervention are the youth-level outcomes. Did the increased consultation/coaching result in more pronounced improvements for youth in TFTC? Because data collection in this study was focused on implementation, limited data are available on youth outcomes. Hence, future work is needed to examine whether the size and type of improvements noted here are sufficient and substantial enough to effect youth's positive developmental gains.

Summary and Conclusions

At present, treatment foster care has very few evidence-based options available. Data from existing studies and discussions with TFC agencies across the country suggest that agencies are trying to provide quality services, with limited financial resources, to youth

who have severe and persistent difficulties. Therefore, it is critical for researchers to help identify promising approaches to practice and cost-efficient and effective ways to encourage improved practice. Together Facing the Challenge provides potential opportunities to do this. The challenge at the moment is to determine the most effective ways to work with agencies to help them integrate TFTC (or any other evidence-based approaches) into their practice, in ways that provide sufficient guidance and supports to create meaningful and sustainable changes.

The current work suggests that enhanced consultation and coaching in the period following training may provide a boost to implementation. Agencies that received enhanced coaching/consultation showed small-to-medium effects across a range of domains. These included more positive assessments of treatment parents' understanding of approaches and more interaction between treatment parents and their supervisors. In addition, a preponderance of the evidence suggests that small but consistent improvements were noted across nearly all measured dimensions. While these were, individually, not large enough to attain statistical significance, they suggest a general pattern of improvement that may be cumulatively important.

At this point, there is a tremendous need to determine viable ways to improve practice across the wide range of agencies that deliver TFC. Providing consultation in the posttraining period has become a standard rallying cry for moving beyond "train and hope" approaches (Fixsen et al., 2005). However, little is known about how much is needed, how it should be delivered, and what blend of consultation, coaching, or other approaches might be most effective. Current results suggest that an increase in structured consultation with a firm grounding in observed practice may move the needle in the desired direction. Additional work is needed to explore whether such shifts are necessary and sufficient to create significant improvements in implementation and sustainability of practice and positive change in youth-level outcomes.

Keywords: treatment foster care; children's mental health services; evidence-based treatment; quality of care; consultation/coaching

References

- Aarons, G. A. (2004). Mental health provider attitudes toward adoption of evidence-based practice: The Evidence-Based Practice Attitude Scale (EBPAS). *Mental Health Services Research, 6*, 61–74. <http://dx.doi.org/10.1023/B:MHSR.0000024351.12294.65>
- Aarons, G. A., Glisson, C., Hoagwood, K., Kelleher, K., Landsverk, J., & Cafri, G. (2010). Psychometric properties and U.S. national norms of the Evidence-Based Practice Attitude Scale (EBPAS). *Psychological Assessment, 22*, 356–365. <http://dx.doi.org/10.1037/a0019188>
- Aarons, G. A., Hurlburt, M., & Horwitz, S. M. (2011). Advancing a conceptual model of evidence-based practice implementation in public service sectors. *Administration and Policy in Mental Health, 38*, 4–23. <http://dx.doi.org/10.1007/s10488-010-0327-7>
- Aarons, G. A., McDonald, E. J., Sheehan, A. K., & Walrath-Greene, C. M. (2007). Confirmatory factor analysis of the Evidence-Based Practice Attitude Scale (EBPAS) in a geographically diverse sample of community mental health providers. *Administration and Policy in Mental Health, 34*, 465–469. <http://dx.doi.org/10.1007/s10488-007-0127-x>
- Aarons, G. A., & Palinkas, L. A. (2007). Implementation of evidence-based practice in child welfare: Service provider perspectives. *Administration and Policy in Mental Health, 34*, 411–419. <http://dx.doi.org/10.1007/s10488-007-0121-3>
- Aarons, G. A., & Sommerfeld, D. H. (2012). Leadership, innovation climate, and attitudes toward evidence-based practice during a statewide imple-

- mentation. *Journal of the American Academy of Child & Adolescent Psychiatry*, 51, 423–431. <http://dx.doi.org/10.1016/j.jaac.2012.01.018>
- Beidas, R. S., Edmunds, J. M., Marcus, S. C., & Kendall, P. C. (2012). Training and consultation to promote implementation of an empirically supported treatment: A randomized trial. *Psychiatric Services*, 63, 660–665. <http://dx.doi.org/10.1176/appi.ps.201100401>
- Beidas, R. S., & Kendall, P. C. (2010). Training therapists in evidence-based practice: A critical review of studies from a systems-contextual perspective. *Clinical Psychology: Science and Practice*, 17, 1–30. <http://dx.doi.org/10.1111/j.1468-2850.2009.01187.x>
- Brimhall, K. C., Fenwick, K., Farahnak, L. R., Hurlburt, M. S., Roesch, S. C., & Aarons, G. A. (2016). Leadership, organizational climate, and perceived burden of evidence-based practice in mental health services. *Administration and Policy in Mental Health*, 43, 629–639. <http://dx.doi.org/10.1007/s10488-015-0670-9>
- Buchanan, R., Chamberlain, P., Price, J. M., & Sprenghelmeyer, P. (2013). Examining the equivalence of fidelity over two generations of KEEP implementation: A preliminary analysis. *Children and Youth Services Review*, 35, 188–193. <http://dx.doi.org/10.1016/j.childyouth.2012.10.002>
- Burns, B. J., & Hoagwood, K. (2002). *Community treatment for youth: Evidence-based interventions for severe emotional and behavioral disorders*. New York, NY: Oxford University Press. <http://dx.doi.org/10.1093/acprof:oso/9780195134575.001.0001>
- Chamberlain, P. (2003). The Oregon multidimensional treatment foster care model: Features, outcomes, and progress in dissemination. *Cognitive and Behavioral Practice*, 10, 303–312. [http://dx.doi.org/10.1016/S1077-7229\(03\)80048-2](http://dx.doi.org/10.1016/S1077-7229(03)80048-2)
- Chamberlain, P., Leve, L. D., & Degarmo, D. S. (2007). Multidimensional treatment foster care for girls in the juvenile justice system: 2-year follow-up of a randomized clinical trial. *Journal of Consulting and Clinical Psychology*, 75, 187–193. <http://dx.doi.org/10.1037/0022-006X.75.1.187>
- Chamberlain, P., Price, J., Leve, L. D., Laurent, H., Landsverk, J. A., & Reid, J. B. (2008). Prevention of behavior problems for children in foster care: Outcomes and mediation effects. *Prevention Science*, 9, 17–27. <http://dx.doi.org/10.1007/s11121-007-0080-7>
- Chamberlain, P., Roberts, R., Jones, H., Marsenich, L., Sosna, T., & Price, J. M. (2012). Three collaborative models for scaling up evidence-based practices. *Administration and Policy in Mental Health*, 39, 278–290. <http://dx.doi.org/10.1007/s10488-011-0349-9>
- Damschroder, L. J., Aron, D. C., Keith, R. E., Kirsh, S. R., Alexander, J. A., & Lowery, J. C. (2009). Fostering implementation of health services research findings into practice: A consolidated framework for advancing implementation science. *Implementation Science*, 4, 50. <http://dx.doi.org/10.1186/1748-5908-4-50>
- Farmer, E. M. Z., Burns, B. J., Dubs, M. S., & Thompson, S. (2002). Assessing conformity to standards for treatment foster care. *Journal of Emotional and Behavioral Disorders*, 10, 213–222.
- Farmer, E. M. Z., Burns, B. J., & Murray, M. (2009). Enhancing treatment foster care: An approach to improve usual-care practice. *Report on Emotional & Behavioral Disorders in Youth*, 9, 79–84.
- Farmer, E. M. Z., Burns, B. J., Wagner, H. R., Murray, M., & Southerland, D. G. (2010). Enhancing “usual practice” treatment foster care: Findings from a randomized trial on improving youths’ outcomes. *Psychiatric Services*, 61, 555–561. <http://dx.doi.org/10.1176/ps.2010.61.6.555>
- Farmer, E. M. Z., Wagner, H. R., Burns, B. J., & Richards, J. T. (2003). Treatment foster care in a system of care: Sequences and correlates of residential placements. *Journal of Child and Family Studies*, 12, 11–25. <http://dx.doi.org/10.1023/A:1021349907744>
- Fixsen, D. L., Blase, K. A., Naoom, S. F., & Wallace, F. (2009). Core implementation components. *Research on Social Work Practice*, 19, 531–540. <http://dx.doi.org/10.1177/1049731509335549>
- Fixsen, D. L., Naoom, S. F., Blase, K. A., Friedman, R. M., & Wallace, F. (2005). *Implementation Research: A Synthesis of the Literature*. Trampa, FL: University of South Florida, Louis de la Parte Florida Mental Health Institute, The National Implementation Research Network.
- Foster Family-Based Treatment Association (FFTA). (2013). *Program Standards for Treatment Foster Care (revised)*. New York: Foster Family-Based Treatment Association.
- Glisson, C., & Schoenwald, S. K. (2005). The ARC organizational and community intervention strategy for implementing evidence-based children’s mental health treatments. *Mental Health Services Research*, 7, 243–259. <http://dx.doi.org/10.1007/s11020-005-7456-1>
- Herschell, A. D., Kolko, D. J., Baumann, B. L., & Davis, A. C. (2010). The role of therapist training in the implementation of psychosocial treatments: A review and critique with recommendations. *Clinical Psychology Review*, 30, 448–466. <http://dx.doi.org/10.1016/j.cpr.2010.02.005>
- Herschell, A. D., Kolko, D. J., Scudder, A. T., Taber-Thomas, S., Schaffner, K. F., Hiegel, S. A., . . . Mrozowski, S. (2015). Protocol for a statewide randomized controlled trial to compare three training models for implementing an evidence-based treatment. *Implementation Science*, 10, 133. <http://dx.doi.org/10.1186/s13012-015-0324-z>
- Hoagwood, K., Burns, B. J., & Weisz, J. R. (2002). A profitable conjunction: From science to service in children’s mental health. In B. J. Burns & K. Hoagwood (Eds.), *Community treatment for youth: Evidence-based interventions for severe emotional and behavioral disorders* (pp. 327–338). New York, NY: Oxford University Press.
- Kazak, A. E., Hoagwood, K., Weisz, J. R., Hood, K., Kratochwill, T. R., Vargas, L. A., & Banez, G. A. (2010). A meta-systems approach to evidence-based practice for children and adolescents. *American Psychologist*, 65, 85–97. <http://dx.doi.org/10.1037/a0017784>
- Kolko, D. J., Hoagwood, K. E., & Springgate, B. (2010). Treatment research for children and youth exposed to traumatic events: Moving beyond efficacy to amp up public health impact. *General Hospital Psychiatry*, 32, 465–476. <http://dx.doi.org/10.1016/j.genhosppsych.2010.05.003>
- McHugh, R. K., & Barlow, D. H. (2010). The dissemination and implementation of evidence-based psychological treatments. A review of current efforts. *American Psychologist*, 65, 73–84. <http://dx.doi.org/10.1037/a0018121>
- Melas, C. D., Zampetakis, L. A., Dimopoulou, A., & Moustakis, V. (2012). Evaluating the properties of the Evidence-Based Practice Attitude Scale (EBPAS) in health care. *Psychological Assessment*, 24, 867–876. <http://dx.doi.org/10.1037/a0027445>
- Mendel, P., Meredith, L. S., Schoenbaum, M., Sherbourne, C. D., & Wells, K. B. (2008). Interventions in organizational and community context: A framework for building evidence on dissemination and implementation in health services research. *Administration and Policy in Mental Health*, 35, 21–37. <http://dx.doi.org/10.1007/s10488-007-0144-9>
- Murray, M., Culver, T., Farmer, B., Jackson, L. A., & Rixon, B. (2014). From theory to practice: One agency’s experience with implementing an evidence-based model. *Journal of Child and Family Studies*, 23, 844–853. <http://dx.doi.org/10.1007/s10826-013-9738-x>
- Murray, M., Dorsey, S., Farmer, E. M. Z., Burns, B. J., & Ballentine, L. (2015). *Together facing the challenge: A therapeutic foster care resource toolkit* (2nd ed.). Durham, NC: Duke University School of Medicine. Retrieved from https://sites.duke.edu/tftc/files/2015/09/TTT_Intro-Session-1-Sample1.pdf
- Murray, M., Dorsey, S., Farmer, E. M. Z., Potter, E., Burns, B. J., & Kelsey, K. L. (2007). *Together facing the challenge: A therapeutic foster care resource toolkit*. Durham, NC: Duke University School of Medicine.
- Murray, M. M., Southerland, D., Farmer, E. M. Z., & Ballentine, K. (2010). Enhancing and adapting treatment foster care: Lessons learned in trying

- to change practice. *Journal of Child and Family Studies*, *19*, 393–403. <http://dx.doi.org/10.1007/s10826-009-9310-x>
- Mustillo, S. A., Dorsey, S., & Farmer, E. M. Z. (2005). Quality of relationships between youth and community service providers: Reliability and validity of the trusting relationship questionnaire. *Journal of Child and Family Studies*, *14*, 577–590. <http://dx.doi.org/10.1007/s10826-005-7189-8>
- Nadeem, E., Gleacher, A., & Beidas, R. S. (2013). Consultation as an implementation strategy for evidence-based practices across multiple contexts: Unpacking the black box. *Administration and Policy in Mental Health*, *40*, 439–450. <http://dx.doi.org/10.1007/s10488-013-0502-8>
- Novins, D. K., Green, A. E., Legha, R. K., & Aarons, G. A. (2013). Dissemination and implementation of evidence-based practices for child and adolescent mental health: A systematic review. *Journal of the American Academy of Child & Adolescent Psychiatry*, *52*, 1009–1025. e18. <http://dx.doi.org/10.1016/j.jaac.2013.07.012>
- Price, J. M., Chamberlain, P., Landsverk, J., & Reid, J. (2009). KEEP foster-parent training intervention: Model description and effectiveness. *Child & Family Social Work*, *14*, 233–242. <http://dx.doi.org/10.1111/j.1365-2206.2009.00627.x>
- Rakovshik, S. G., & McManus, F. (2010). Establishing evidence-based training in cognitive behavioral therapy: A review of current empirical findings and theoretical guidance. *Clinical Psychology Review*, *30*, 496–516. <http://dx.doi.org/10.1016/j.cpr.2010.03.004>
- Schoenwald, S. K., & Hoagwood, K. (2001). Effectiveness, transportability, and dissemination of interventions: What matters when? *Psychiatric Services*, *52*, 1190–1197. <http://dx.doi.org/10.1176/appi.ps.52.9.1190>
- Schoenwald, S. K., Sheidow, A. J., & Letourneau, E. J. (2004). Toward effective quality assurance in evidence-based practice: Links between expert consultation, therapist fidelity, and child outcomes. *Journal of Clinical Child and Adolescent Psychology*, *33*, 94–104. http://dx.doi.org/10.1207/S15374424JCCP3301_10
- Welsh, B. C., & Greenwood, P. W. (2015). Making it happen: State progress in implementing evidence-based programs for delinquent youth. *Youth Violence and Juvenile Justice*, *13*, 243–257. <http://dx.doi.org/10.1177/1541204014541708>