Adm Policy Ment Health
DOI 10.1007/s10488-016-0788-4

ORIGINAL ARTICLE

Statewide Implementation of Parenting with Love and Limits Among Youth with Co-Existing Internalizing and Externalizing Functional Impairments Reduces Return to Service Rates and Treatment Costs

Emma M. Sterrett-Hong[1] · Eli Karam[1] · Lynn Kiaer[2]

© Springer Science+Business Media New York 2017

Abstract Many community mental health (CMH) systems contain inefficiencies, contributing to unmet need for services among youth. Using a quasi-experimental research design, we examined the implementation of an adapted structural-strategic family intervention, Parenting with Love and Limits, in a state CMH system to increase efficiency of services to youth with co-existing internalizing and externalizing functional impairments (PLL $n=296$; Treatment-As-Usual $n=296$; 54% male; 81% Caucasian). Youth receiving PLL experienced shorter treatment durations and returned to CMH services at significantly lower rates than youth receiving treatment-as-usual. They also demonstrated significant decreases in internalizing and externalizing symptoms over time. Findings lay the foundation for further examination of the role of an adapted structural-strategic family treatment in increasing the efficiency of CMH systems.

Keywords Children · Mental health system · Treatment duration · Treatment cost

Background

Improving treatment for children suffering from mental illness is a national priority. Approximately one out of every five children in the United States experiences a mental health difficulty (CDC 2013; Merikangas et al. 2010). On average, 40–75% of children in the United States with mental health disorders do not receive the services they need (Mental Health America 2015; NIMH 2001). Due to federal sequestrations, states across the country have sustained cuts in funding for community mental health treatment (NAMI 2011). Relatedly, policy reports and empirical papers have documented the insufficient availability of therapists in publicly funded mental health systems (e.g., Fund 2010; Cummings et al. 2014; Hyde 2013). The disproportionate number of youth seeking treatment to therapists is expected to increase as more people in the United States gain access to healthcare through the Affordable Care Act (Garland et al. 2013). Importantly, youth living in rural areas face even lower availability of therapists, including those trained in evidence-based practices, as well as less accessibility due to higher levels of stigma toward therapy than youth in urban areas (Anderson et al. 2013; Cummings et al. 2014; Peterson et al. 2009).

Despite the high levels of unmet need for mental health treatment in the United States, the mental health treatment that is provided is costly to society and families. In fact, out of all conditions affecting children, mental health disorders cost the most to treat (Soni 2009). The Centers for Disease Control and Prevention (CDC) estimates the annual cost of child mental health disorders to be $247 billion (CDC 2013). One explanation for both unmet need and the relatively high cost of mental health treatment when provided are inefficiencies in mental health systems (Lagomasino et al. 2010). Efforts to improve efficiency in mental health systems can address any factors that minimize cost for a given output, such as improved clinical functioning (Lagomasino et al. 2010). Factors that could improve efficiency in mental health systems include increasing the use of evidence-based treatments, providing treatment in

✉ Emma M. Sterrett-Hong
emma.sterrett@louisville.edu

[1] Couple and Family Therapy Program, Kent School of Social Work, University of Louisville, 310 N. Whittington Pkwy Burhans Hall 134, Louisville, KY 40222, USA

[2] Hornby Zeller Associates, Inc., Troy, USA

Published online: 24 January 2017

less intensive treatment settings such as outpatient mental health as opposed to residential facilities or hospitals, reducing unnecessarily long prescribed treatment durations, and reducing rates of youth who return to services after treatment termination (Billings and Mijanovich 2007; Crawley et al. 2013; Hyde 2013; NAMI 2014; de Oliveira et al. 2016). In short, with the limitations in the number of mental health clinicians available in public mental health systems and the high cost of mental health treatment, it is vastly important that therapists implement services not only effectively but also efficiently, so they can positively impact as many children and families in need of services as possible.

Youth with Co-Existing Functional Impairments in Internalizing and Externalizing Domains

Improving mental health services is especially crucial for youth with coexisting functional impairments resulting from internalizing (i.e., affective and anxiety; Achenbach et al. 2012; Krueger et al. 1998) and externalizing (i.e., oppositionality, conduct-disordered behavior, and hyperactivity; Achenbach et al. 2012; Krueger et al. 1998) symptoms or disorders. Functional impairment, or difficulties functioning in vocational or educational settings or performing personal roles and tasks (Barwick et al. 2014), is an indicator of psychosocial functioning often utilized in public mental health settings (Bates et al. 2006). Measures of functional impairment provide clinical significance not afforded by symptom checklists alone since they directly assess for difficulties performing tasks and roles in everyday settings (Francis et al. 2012; Hodges et al. 2004). While functional impairments and symptoms describe different aspects of psychological adjustment, they are closely related as functional impairments are the result of and secondary to psychological symptoms (Fitch and Grogan-Kaylor 2012; Hodges et al. 2004). Importantly, a preponderance of findings has indicated internalizing and externalizing symptoms commonly co-occur in children and adolescents (Barker et al. 2010; Chase and Eyberg 2008; SAMHSA 2011). Thus, examining the efficiency of services provided to youth with coexisting functional impairments related to these symptoms would result in findings that can be more readily applied to common clinical presentations in public mental health settings.

Moreover, youth with co-existing functional impairment in internalizing and externalizing domains have been found to be hospitalized at a higher rate and to have a higher likelihood of being placed outside of the home than youth with impairment in just one domain (Hodges and Wotring 2000). Youth with co-occurring psychological disorders also often experience longer durations of treatment and higher rates of return-to-treatment (Knapp et al. 2002; Nobile et al. 2003), than those only exhibiting one disorder. Considering the rates of co-occurring difficulties and the cost of mental health treatment, finding efficient, effective treatments for youth presenting with functional impairments in internalizing and externalizing domains is vastly important.

A potential reason for longer treatment durations and higher rates of return to treatment among youth with co-existing internalizing and externalizing difficulties may be that there are very few theoretically and practically unified approaches that provide guidance for treating both types of difficulties equally and in a stream-lined fashion. This limited guidance may be partly because the proposed theoretical mechanism of change in most evidence based treatments is often relatively narrowly focused (e.g., changing reinforcement and punishment contingencies in the home, Eyberg et al. 2008; McMahon and Forehand 2005; altering depressive or anxious thoughts to decrease distress; David-Ferdon and Kaslow 2008; Weisz et al. 2006). As a result, in practice, some therapists may resort to sequentially adding treatment protocols, or other less efficient strategies to treating both types of difficulties, extending treatment duration or potentially leading to clients not receiving similar dosages of treatments for both types of difficulties if they drop-out before the second intervention is completed. Some attempts have been made to address multiple disorders that fall under the category of either externalizing or internalizing disorders using a unified treatment protocol (Bullis et al. 2015; Chu et al. 2016; Bilek and Ehrenreich-May 2013; Weersing et al. 2012). In addition, recently some scholars have also put forth an approach to addressing each client's specific presentation, including co-existing externalizing and internalizing disorders, by strategically selecting evidence based treatment elements to create individualized treatment protocols (Bearman and Weisz 2015; Chorpita et al. 2013; Weisz et al. 2012). Notwithstanding these developments, there have been few wholly integrated treatment approaches in the empirical literature for expressly addressing mechanisms that may influence both internalizing and externalizing difficulties within the same treatment protocol.

Family therapy based on structural and strategic family systems models (Haley 1976; Minuchin 1974; Nichols 2012) may be one approach to efficiently addressing co-existing internalizing and externalizing difficulties. Family systems theories view the family system, as opposed to an individual family member, as the client and unit of clinical focus (Nichols 2012). Structural-strategic family therapy, a specific family systems theory and approach, seeks to change the family system by disrupting family interaction cycles that maintain presenting problems, establishing a clear family hierarchy in which parents have more authority than children, and facilitating relationship boundaries that permit amounts of emotional closeness and distance

appropriate to each family member's age and role (Haley 1976; Minuchin 1974; Nichols 2012). Structural-strategic theorists and practitioners assert that, after a relatively brief amount of time in therapy, the family system can make sufficient changes in these areas, which, in turn, can support and enhance healthy individual functioning, in both internalizing and externalizing domains, long after therapy has ended (Gardner et al. 2006; Santisteban et al. 1997).

An evidence-based structural-strategic family treatment could lead to increased efficiency in treating coexisting internalizing and externalizing difficulties (i.e., positive clinical outcomes despite a shorter amount of time/reduced cost) for multiple reasons. First, the treatment lengths for several child evidence-based treatments range from 8 to 16 sessions (see David-Ferdon and Kaslow 2008; Eyberg et al. 2008; McGuire et al. 2015 for reviews), which is relatively shorter than treatment length in usual care settings, which tends to range from an average of 11 sessions to 22 sessions (Garland et al. 2010; Warren et al. 2010). More specific to evidence-based family therapies, several studies have found family treatments to lead to greater maintenance of treatment gains, relative to individual treatments, in individual and family functioning (Horigian et al. 2015; Santisteban et al. 2006). In turn, if children are maintaining treatment gains longer as a result of family treatment, they may return to mental health services at lower rates than youth who originally received individual treatment. Moreover, a treatment with a broad base in structural-strategic family therapy, which seeks to improve family processes, may be able to address multiple individual difficulties at once, reducing treatment length. However, there have been very few examinations of a structural-strategic family therapy protocol to reduce treatment duration and return to service rates among youth with coexisting internalizing and externalizing functional impairments.

The Parenting with Love and Limits (PLL) intervention is an adapted structural-strategic family therapy intervention that combines multiple family group and individual family therapy to decrease severe oppositional and delinquent behaviors, as well as emotional difficulties, among children and adolescents. PLL follows the basic philosophy of structural-strategic family therapy (Haley 1976; Minuchin 1974; Tolan 1989), but also incorporates elements of emotionally-focused systemic therapy, which focuses on increasing the expression of primary emotions and building attachments between family members (Diamond et al. 2002; Greenbereg et al. 1993). The emotionally-focused components complement and expand on the focus in structural family therapy on promoting a healthy level of closeness between family members. PLL has been replicated in 16 states and in Holland, is considered promising in the OJJDP Model Programs Guide (http://www.ojjdp.gov/mpg/), and is currently listed on SAMHSA's National Registry of Evidence-Based Programs (http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=45). Originally PLL was designed to treat youth involved in the juvenile justice system, but it has also been adapted successfully to the child welfare system. Across multiple studies, PLL has been found to decrease externalizing problems (Sells et al. 2011) and substance use (Sells et al. 2003), as well as rates of reoffending (Karam et al. in press; Sells et al. 2011; Winokur-Early et al. 2013). Although not part of the original focus, one study found that participation in PLL also decreased depressive symptoms in justice system-involved youth (Sells et al. 2011).

Importantly, PLL has yet to be examined among children receiving services in a community mental health system, or more specifically, as a predictor of rates of return to mental health services. However, over the past 10 years, child mental health scholars have begun to emphasize the importance of increasing uptake of evidence-based treatments in community mental health systems (e.g., Hoagwood et al. 2014; Novins et al. 2013; Pires and Stroul 2013). Given PLL was created based on experiences of the developer in the field, as well as its success in reducing rates of recidivism among a juvenile justice population, PLL deserves further study as a potentially effective and efficient treatment for youth with co-existing functional impairments in internalizing and externalizing domains receiving treatment in a community mental health system.

The Current Study

In 2007, the Director of the Idaho community mental health (CMH) system decided to implement PLL in the Idaho CMH as a potential strategy for reducing the average treatment duration of services for children and adolescents, which was 12 months (R. Edmunds, personal communication, November 18, 2007). When speaking with the intervention team, he noted a particular need for more stream-lined services for youth with marked impairment in both internalizing and externalizing domains. In the current study we examined the extent to which this initiative was successful. Specially, we used a quasi-experimental design to examine whether PLL will be associated with reduced treatment duration, rates of return to mental health treatment, and cost of treatment among youth in the CMH system in Idaho exhibiting coexisting functional impairments in internalizing and externalizing domains. It is predicted that, compared to treatment-as-usual, PLL will be completed in a shorter amount of time, will result in lower rates of return to mental health treatment, and will cost less. In addition, pre-post data related to internalizing and externalizing symptoms were collected for youth who received PLL, so we also examined changes in symptoms among the PLL group. Given that efficiency in mental health systems

is determined by reducing cost while still achieving desired outcomes (Lagomasino et al. 2010), we conducted this within-group analysis to examine achievement of a particular desired outcome among clinical populations, symptom reduction. It is predicted that youth receiving PLL will demonstrate decreases in internalizing and externalizing symptoms over time.

Method

Study Context

Idaho ranks 42nd in the country with regard to access to mental health treatment for children (MHA 2015), and therefore would benefit from examining ways to better meet the mental health needs of its youth. Treatment-as-usual (TAU) in the Idaho CMH system consists of a variety of services and treatment modalities provided by masters-level clinicians, including individual therapy, clinic-based family therapy, equine therapy, family support court, in-home family therapy, parenting classes, psychoeducational materials, and wrap-around services (R. Edmunds, personal communication, November 18, 2007; J. Arambarri, personal communication, February 17, 2016). Approximately 54% of the youth in the Idaho community mental health (CMH) system live in rural areas. Youth receiving services in the Idaho CMH system are more diverse than the population in Idaho in general with Caucasian youth making up 76.7% of CMH clients, followed by 18.8% who were mixed race, 2.8% Native American, 2% African American, and 0.6% Asian. As a point of reference, the population in general in Idaho is 94% Caucasian (Census 2014). The majority, 64%, of youth receiving CMH services are male.

At the start of the PLL initiative in Idaho, Idaho CMH administrators decided that one therapist in each of the seven Idaho CMH regions would receive training in PLL, with an additional therapist in a region being trained if the PLL therapist in that region left the position. When a CMH clinical case manager assessed a youth to be exhibiting at least moderate functional impairment subsequent to internalizing and externalizing difficulties, the case manager referred the youth and his/her family to a PLL therapist in their region. If the caseload of the PLL therapist in a region was full at the time, the youth was referred to another CMH mental health provider in the area. Some case managers may not have been systematic in making referrals and referred youth to usual care even when the PLL therapist in their region had an opening. Thus, the treatment-as-usual group consisted of youth referred by their clinical case manager to a CMH provider in the Idaho CMH system not trained in PLL.

Procedure

The Idaho CMH system provided a copy of its clinical and administrative database to one member of the research team who signed an agreement guaranteeing compliance with HIPPA regulations and confidentiality, and was the only member of the research team with access to identifiable data. Data for the current study was drawn from records for youth in Idaho receiving services in the CMH system between June 2008 and January 2014.

Participants

Inclusion criteria for youth in the intervention group included: (1) between ages 10 and 17, (2) receiving PLL through the CMH system, and (3) rated by their clinical case manager as evidencing at least a moderate range of impairment in both internalizing and externalizing functioning as measured by the Child and Adolescent Functional Assessment Scale (CAFAS) (Hodges 1997) Moods/Emotions subscale and at least one of the Behavior Toward Others, Home Role Performance, or Community Role Performance subscales. Trained clinical case managers completed the CAFAS as an initial assessment tool for each youth entering CMH behavioral health services based on reports from youth and caregivers, as well as a review of records. The CAFAS assesses functional impairment in children and adolescents across eight domains with possible responses including 0 (minimal impairment), 10 (mild impairment), 20 (moderate impairment), and 30 (severe impairment).

Youth in the final analytic PLL treatment sample ($n=296$) were around 15 years of age on average (see Table 2). Of these youth, 81% were Caucasian, 10% were mixed race, 2% African American, 2% Native American, and 5% race unknown. In addition, 54% of the youth were male, and 54% were from rural areas. All youth received a score of 20 or above on the (1) Moods/Emotions subscales and (2) Behavior Toward Others, Community or Home subscales. Specifically, 239 youth exhibited moderate impairment in both Moods/Emotions and Behavior Toward Others, 213 youth exhibited moderate impairment in both Moods/Emotions and Community, and 260 exhibited impairment in both Moods/Emotions and Home. Interestingly, 164 youth exhibited at least moderate impairment in all four areas. The comparison TAU group ($n=296$) also consisted of youth with an average age around 15. Among TAU youth, 81% were Caucasian, 10% mixed race, 2% African American, 2% Native American. Coexisting functional impairments among the TAU group included 239 youth who exhibited moderate impairment in both Moods/Emotions and Behavior Toward Others, 228 youth who exhibited moderate impairment in both Moods/Emotions

and Community, and 255 who exhibited impairment in both Moods/Emotions and Home. Of the youth receiving TAU, 169 exhibited at least moderate impairment in all four areas.

Therapists in the Idaho CMH were masters-level clinicians in social work, marriage and family therapy, or counseling. The vast majority were Caucasian, consistent with the population of Idaho as a whole. Currently, of the 43 CMH clinicians, 11 are male and 32 are female. The Idaho CMH administration did not grant permission for the release to the research team of information regarding years of experience of non-PLL therapists. Regarding PLL therapists, since they were selected from CMH clinicians, they met the requirements for education and overall demographic characteristics of CMH clinicians. The seven therapists currently providing PLL in Idaho include three licensed clinical social workers, two licensed clinical professional counselors, one un-licensed therapist with a masters degree in counseling and one un-licensed therapist with a masters degree in family and human development. The average years of post-masters experience for PLL therapists is 15.8 years. There are four female therapists and three male therapists implementing PLL.

Intervention

Parenting with Love and Limits

Parenting with Love and Limits (PLL) is a manualized treatment originally developed for youth between the ages of 10 and 18 exhibiting oppositional and/or delinquent behavior (Sells 1998, 2000; Sells et al. 1995). PLL integrates the philosophy and core components of structural (Minuchin 1974) and strategic (Haley 1987) family therapy, as well as elements from emotionally-focused systemic therapy (Diamond et al. 2002; Greenbereg et al. 1993; Stavrianopoulos et al. 2014). PLL is divided into three implementation stages: Stage I—Intensive, Stage II—Transition, Stage III—Maintenance (see Table 1), and combines a six-week parenting group, consisting of four to six families, with six intensive two-hour family therapy sessions with each family individually. Each PLL intervention team consists of one master's level therapist and one master's level case manager. Group sessions are conducted at the therapist's office or another location in the community, and family sessions are conducted in the family's home.

PLL is based on structural-strategic family systems principles and seeks to improve family boundaries to allow for appropriate distance and closeness between family members, as well as to encourage a healthy family hierarchy in which parents have more authority and influence than children (Sells 2000). Clinicians began by spending one to two sessions focused on building rapport with families

Table 1 The parenting with love and limits (PLL) model

	Stage I: intensive Month 1 and 2	Stage II: transition Month 3	Stage III: maintenance Month 4, 5, and 6
Treatment components	*PLL motivational interviewing* One to two sessions lasting on average one hour with youth and family *PLL parent and youth group modules* Lasting 2 h on average per group Group 1: why adolescents have serious emotional and behavioral problems Group 2: how to stop button-pushing Group 3: how to create a contract Group 4: role play aftercare delivery Group 5: troubleshooting aftercare plan Group 6: how to restore lost nurturance *PLL family therapy—phases I and II* Setting the terms for therapy and creating the first contract: four family therapy sessions lasting 2 h each or the equivalent of eight traditional one hour sessions. Conducted in the home or in an office setting	*No more PLL group modules* *PLL family therapy–Phases III and IV* Dress rehearsals, troubleshooting, and wound work if needed: two or more sessions lasting two hours in duration or the equivalent of four one hour sessions conducted in the home or in an office setting *Wraparound services in the community are identified*: Part-time case manager that works alongside the PLL therapist helps arrange and execute community services such as job and/or vocational placement, school reintegration, medication management, and mentoring	*Relapse prevention* Calls back to family every 30 days for three months post-graduation from PLL to monitor aftercare plan progress and address any obstacles *Refresher tune-up sessions* Additional family therapy sessions as needed if relapse

and enhancing motivation to engage in treatment. Next, the clinicians lead groups of families through a set of six sessions consisting of psychoeducation on factors that contribute to internalizing and externalizing difficulties, effective communication, behavior management, relapse prevention, and increasing nurturance among family members. Halfway through the multiple family group, participants began individual family therapy with continued focus on increasing structure to discourage misbehavior, as well as decreasing or avoiding situations that have made individual family members feel criticized or rejected in the past. During individual family therapy, family members role play ways to handle difficult emotional or behavioral family interactions in the future as a way to practice applying learned skills. PLL therapists work with each family until the family has met all of the graduation requirements. Graduation requirements consist of completing groups and family sessions, as well as sufficiently complying with a behavioral contract in school or work. Finally, after graduation, PLL clinicians contact clients every 30-days for 3 months to monitor progress and trouble-shoot problems maintaining gains. The combination of both multiple family groups and family therapy within one continuum of care is a unique feature of PLL, as opposed to most other evidence-based family treatments for youth (e.g., Henggeler and Sheidow 2012; Szapocznik and Williams 2000).

Therapist selection and training Therapists in the Idaho CMH who were interested in being trained in PLL completed a brief application and participated in a pre-screening activity with the trainers. The pre-screening activity was designed to determine whether the therapists were comfortable working with youth with complicated and severe symptom presentations and with families resistant to treatment, and consisted of a role-play in which the trainers took on the role of a family and the therapists practiced implementing a section of one session module. The therapists chosen participated in an initial 5-day intensive training in PLL, conducted by the model developer and an additional clinical trainer. The training consisted of both didactic and experiential exercises. Therapists received 30 h of continuing education credits after completing the PLL training. Subsequent to the initial training, therapists received 4 h of supervision per month from PLL supervisors using video conferencing.

Treatment fidelity Although therapists were not required to demonstrate fidelity to the PLL model prior to seeing cases, they received feedback on sessions weekly from a PLL supervisor, to facilitate their adherence to the model. To enhance feasibility of fidelity monitoring, each week the supervisor randomly selected one video recorded treatment session from the sessions of each therapist to rate for model adherence. The supervisor then utilized the PLL Video Supervision Manual to rate each randomly selected session (VSM) (Souder 2011). The PLL VSM includes fidelity checklists for each of the six group therapy sessions, as well as the four phases of family therapy. Items are ranked "0" for task not completed or "1" for task completed. The PLL developers have established inter-rater reliability for the fidelity checklists (Souder and Sells 2016). Guidelines for ICC indicate scores between 0.60 and 0.74 represent good inter-rater reliability, and scores between 0.75 and 1.00 represent excellent inter-rater reliability (Cicchetti 1994). Intra-class correlations for the group fidelity checklists have ranged from 0.64 to 0.96, falling in the good and excellent ranges, and for the family fidelity checklists from 0.85 to 0.99, falling in the excellent range (Sells and Souder 2016).

For the current study, one PLL supervisor supervised all seven PLL clinicians in the Idaho CMH system. Any therapists who scored below 80% on the checklist for any video were asked to submit an additional video of that particular session with a new client until they obtained a passing score. Because the fidelity checklists were originally collected for supervisory purposes, the supervisor did not retain them with absolute consistency, and, thus, a subset of the supervision fidelity rating sheets ($n=62$ sessions, across 9 clinicians) were available for examination. The clinicians achieved an overall adherence rating of 90% for content in the group therapy sessions and a rating of 87% for content in the family therapy sessions. These rates of adherence meet the threshold for high treatment fidelity advocated in the literature (Borrelli et al. 2005; Garbacz et al. 2014).

Treatment-as-Usual

According to Idaho CMH administrators, treatment-as-usual in the Idaho CMH consists of a variety of services from a variety of theoretical orientations. These include individual therapy, clinic-based family therapy, equine therapy, family support court, in-home family therapy, parenting classes, psychoeducational materials, and wrap-around services. Supervision for CMH therapists varies widely, from weekly clinical supervision to only occasional administrative supervision, depending on whether the therapists are licensed and the type of mental health service they provide (R. Edmunds, personal communication, November 18, 2007; J. Arambarri, personal communication, February 17, 2016).

Measures

Functional Impairment in Internalizing and Externalizing Domains

At the beginning of treatment of all youth treated in the Idaho CMH, trained clinical case managers completed

the CAFAS as an initial assessment tool based on reports from youth and caregivers, as well as a review of records. The CAFAS assesses functional impairment in children and adolescents across eight domains, School, Behavior Towards Others, Moods/Emotions, Home, Thinking Problems, Self-Harm, Substance Use, and Community. Possible responses include 0 (minimal impairment), 10 (mild impairment), 20 (moderate impairment), and 30 (severe impairment). The CAFAS has demonstrated internal and inter-rater reliability, as well as concurrent and predictive validity (Hodges et al. 1999; Hodges and Wong 1996; Manteuffel et al. 2002). It has been widely used in clinical samples to measure clinically significant impairments in functioning (Hodges and Wotring 2000; Rosenblatt and Rosenblatt 2000). Previous research has suggested that five CAFAS subscales, School, Behavior Towards Others, Home, Substance Use, and Community relate to externalizing disorders, whereas three CAFAS subscales, Moods/Emotions, Thinking Problems, and Self-Harm, relate to internalizing problems (Ebesutani et al. 2008; Francis et al. 2012). However, since definitions of internalizing and externalizing disorders in the literature have focused more narrowly on Internalizing problems as including mood and anxiety concerns, and externalizing problems, referring to oppositional, conduct-disordered and hyperactivity concerns (Achenbach et al. 2012; Krueger et al. 1998), we used scores from the Moods/Emotions subscale as measuring impairment associated with internalizing difficulties and the Behavior Towards Others, Home, and Community subscales, as measuring impairment associated with externalizing difficulties.

Return to CMH Services

Return to services was measured using the administrative data provided by the Idaho Division of Behavioral Health, including both program enrollment and payment for services.[1] Four types of services were examined: out-patient treatment, crisis services, inpatient hospitalizations, and residential/alternate care placement.

[1] Idaho changed databases in the summer of 2011. Prior to that, return to services was measured by payment data; afterwards return to services was measured by new program enrollments. It is possible that, under the earlier system, a youth who was receiving multiple types of treatment concurrently might have been charged with a return to service due to a periodic payment made for ongoing treatment. Under the new system there are almost no children who are enrolled in multiple treatments at once, so the impact of this discrepancy is expected to be very low.

Youth Psychological Functioning

Parent report on the Child Behavior Checklist (CBCL) (Achenbach and Rescorla 2001) was collected from a subsample of the PLL group, the last 156 youth to complete treatment, at the beginning of treatment and after completion of PLL. The CBCL was not completed for all youth because in the first 2 years of PLL implementation in the Idaho CMH, the CBCL was administered inconsistently and also, when completed, was not uniformly included in clinical files. The CBCL includes two broad-based scales: Externalizing and Internalizing Problems, with the Externalizing scale comprising two smaller sub-scales, Rule-breaking and Aggressive Behaviors, and the Internalizing Problems scale consisting of three smaller sub-scales, Anxious, Withdrawn, and Somatic Complaints subscales. In addition, the CBCL also includes three sub-scales that correspond to DSM IV diagnoses, Attention, Oppositional Defiant, and Conduct Problems sub-scales, as well as sub-scales for Social Thought, and Other Problems. CBCL raw scores can be converted into t-scores as a measure of clinical significance, with, for sub-scales, t-scores 64 and below considered in the Normal range, between 65 and 69 in the Borderline range, and 70 and over in the Clinical range. Research on the CBCL suggests that the instrument exhibits high internal consistency and inter-rater reliability, as well as high face, construct, and predictive validity (Nakamura et al. 2009). The measure demonstrated good internal reliability for the broad-based sub-scales in the current sample: $\alpha = 0.92$ for the Externalizing subscale, $\alpha = 0.91$ for the Internalizing subscale, $\alpha = 0.82$ for the Social Problems subscale, and $\alpha = 0.74$ for the Thought Problems subscale. In addition, the smaller sub-scales exhibited good internal consistency with alphas of 0.76 or above.

Results

Preliminary Data Analysis

Selection of Treatment-as-Usual (TAU) Comparison Group to Address Baseline Equivalence

Initial descriptive analyses comparing PLL youth and the population of youth receiving TAU in the Idaho CMH as a whole demonstrated that the two groups showed statistically significant differences, such that youth in PLL were more likely to be of mixed race than youth in the TAU comparison group and that youth in PLL had higher scores in Self-Harm Behavior on the CAFAS. Due to these differences, which precluded random selection of a comparison group, propensity score matching (PSM) was used to

Table 2 Comparison of PLL youth with TAU youth in the Idaho child mental health system at baseline after propensity score matching following an intent-to-treat approach

	Comparison ($n=296$)	PLL ($n=296$)	χ^2 or F	p
Sex				
Female	136	134	*	0.93
Male	160	162		
Race				
Native American/Alaska Native	6	6	1.18	0.98
Asian	1	1		
Black	7	7		
Mixed	29	30		
Unknown	13	11		
White	240	240		
Ethnicity				
Hispanic	21	23	0.29	0.87
Not Hispanic	127	121		
Unknown	148	152		
M age at start of treatment	14.63	14.63	0	0.99
CAFAS scores				
Behavior toward others	21.59	21.32	0.12	0.73
Community	18.99	18.28	0.54	0.46
Home	24.97	25.51	0.36	0.55
Moods/emotions	22.13	22.5	0.4	0.53
School/work	23.58	22.53	1.05	0.31
Self-harm behavior	10.81	10.71	0.01	0.92
Substance abuse	6.72	6.22	0.31	0.58
Thinking	3.89	3.92	0	0.95

*Fisher's exact test

construct a matched comparison group of the same size as and having similar characteristics to the treatment group. PSM analyses allow for the identification of a control group that has similar characteristics to the treatment group as a whole, rather than a set of paired matches in which each pair shares a large number of characteristics (Rubin and Thomas 2000). PSM was conducted to select two TAU comparison groups, one following a Protocol Adherence approach, or selection of a comparison group that matches overall the group of participants who completed the intervention, and one following an Intent-to-Treat approach, or selection of a comparison group to match the group of all youth assigned to PLL, regardless of whether they completed the intervention. A Protocol Adherence approach examines the effectiveness of the model as it was intended to be delivered (Have et al. 2008). An Intent-to-Treat approach includes all participants referred to a treatment, whether or not they completed the treatment, to examine the average effect of an intervention in "real-world" settings, across the range of dosages actually received (Have et al. 2008). Tables 2 and 3 show that after PSM, no significant difference in terms of demographic variables (e.g., gender, race) or psychological difficulties, as measured by the CAFAS, existed between the TAU comparison groups selected and the intent-to-treat PLL group and protocol adherence PLL graduate groups, respectively.

Attrition

We examined attrition rates to determine whether any participant variables predicted drop-out. Chi square, Fisher's exact test, and ANOVA analyses revealed there were no significant differences between the youth who graduated from PLL and those who dropped out of treatment early across race/ethnicity, age, and CAFAS scores measuring psychological difficulty. There was a trend toward significance for a gender difference in attrition, with females being more likely to complete PLL than males, Fisher's exact test $p=.09$.

Treatment Completion Rates

We also examined the number of families completing treatment. Of the families in the PLL group, 246, or 83.11%, completed treatment.

Primary Data Analysis

Paired t-tests were conducted to examine differences in the percentages of youth who returned to treatment between the PLL and TAU groups. Effect sizes were also calculated. Analyses comparing the PLL and TAU groups were conducted following both protocol adherence and intent-to-treat models. In addition, paired t-tests were conducted to examine pre-post differences in CBCL scores among a sub-sample of youth, consisting of the last 156 youth to complete PLL during the timeframe studied. Of note, as fidelity data was only available for a subset of client sessions, we were unable to examine fidelity as a predictor of client outcomes in the models.

Between Group Analyses

Length of Service

We first compared the average treatment duration for youth receiving PLL and those receiving TAU. The average PLL length of service was 78 days (2.6 months) versus standard CMH treatment at 12 months.

Table 3 Comparison of PLL graduates with TAU youth in the Idaho child mental health system at baseline after propensity score matching following a protocol adherence approach

	Control ($n=246$)		PLL ($n=246$)		χ^2 or F	p
Sex						
Female	117	3.73%	117	47.56%	*	1.00
Male	129	4.11%	129	52.44%		
Race						
Native American/Alaska Native	6	0.19%	5	2.03%	0.77	0.98
Asian	2	0.06%	1	0.41%		
Black	8	0.25%	1	0.41%		
Hawaiian/other Pacific Islander	0	0.00%	0	0.00%		
Mixed	29	0.92%	26	10.57%		
Unknown	9	0.29%	10	4.07%		
White	192	6.12%	197	80.08%		
Ethnicity						
Hispanic	21	0.67%	21	8.54%	2.78	0.96
Not Hispanic	104	3.31%	101	41.06%		
Unknown	121	3.86%	124	50.41%		
Age						
Start of treatment	14.57		14.6		0.04	0.84
CAFAS scores						
Behavior toward others	22.32		21.34		1.17	0.28
Community	18.7		17.89		0.59	0.44
Home	26.42		25.41		0.89	0.35
Moods/emotions	22.97		22.52		0.40	0.53
School/work	23.82		22.28		1.76	0.19
Self harmful behavior	10.16		10.65		0.21	0.65
Substance abuse	6.18		6.39		0.22	0.64
Thinking	4.59		3.94		0.87	0.35

*Fisher's exact test

Table 4 Intent-to-treat comparison of return-to-service rates between PLL youth and youth in the comparison group

Outcomes within 1 year of completion	Percentages		*t* test for statistical significance			Effect size
	PLL ($n=296$) (%)	Control ($n=296$) (%)	*t*	DF	*p*	Relative risk (%)
Out-patient treatment	35.14	89.53	16.50	502	<0.001	39.25
Crisis services	8.45	26.35	5.91	497	<0.001	32.05
In-patient hospitalization	2.70	8.78	3.21	469	<0.001	30.77
Residential/alternate care placement	2.70	8.45	3.07	474	0.001	32.00
Overall return to services	39.19	94.93	17.92	409	<0.001	41.28

Return to Service Rates

Intent-to-treat Analyses Intent-to-treat analyses, in which all youth assigned to PLL, regardless of whether they completed the treatment program (Have et al. 2008), were compared to youth in the TAU group were also conducted. Across all four categories of services, out-patient treatment, crisis services, inpatient hospitalizations, and residential/alternate care placement, youth in the PLL group returned to services post-discharge at significantly lower rates than youth in the comparison group (see Table 4), with meaningful effect sizes in the form of relative risk, defined as the ratio of the likelihood a youth receiving PLL would return to a treatment setting compared to that a youth receiving

Table 5 Protocol adherence comparison of return-to-service rates between PLL graduates and youth in the treatment-as-usual group

	PLL ($n=246$) (%)	Control ($n=246$) (%)	t	DF	p	Relative risk (%)
Out-patient treatment	36.18	89.02	15.96	506	<0.001	40.64
Crisis services	9.35	19.51	3.31	541	<0.001	47.92
In-patient hospitalization	2.85	12.60	5.11	434	<0.001	22.58
Residential/alternate care placement	2.44	9.76	3.96	443	<0.001	25.00
Overall return to services	40.24	96.34	19.68	379	<0.001	41.77

TAU would return to that setting. Youth in the PLL group had a relative risk of 39.25% of receiving out-patient treatment compared to youth in the TAU condition. There was a 35.14% likelihood a youth who participated in PLL would access out-patient treatment after termination compared to an 89.53% chance a youth receiving TAU would return to an out-patient setting. PLL youth had a relative risk of receiving crisis services of 32.05%, with 8.45 and 26.35% of PLL and TAU youth, respectively, accessing services after termination. Similarly, the relative risk of the PLL group of receiving in-patient hospitalization was 30.77%, with 2.70% of youth receiving PLL compared to 8.78% the youth in the TAU condition being admitted to a hospital. Finally, compared to the youth receiving TAU, those receiving PLL had a relative risk of 32.00% of being referred for residential/alternate care placement, with 2.70 and 8.45% of PLL and TAU youth, respectively, receiving residential/alternate care placement. All significance levels were $p<.001$, satisfying the Bonferroni correction threshold.

Protocol Adherence Analyses A protocol adherence approach to the between-group analyses, such that only youth who completed the treatment were compared to youth in a matched comparison group (Have et al. 2008), demonstrated that PLL graduates returned to services at less than half the rate of the TAU group, with meaningful effect sizes in the form of relative risk, than youth in the TAU group (see Table 5). PLL graduates had a relative risk of returning to out-patient treatment of 40.64% compared to youth in the TAU group, with 35.14% of PLL youth and 89.53% of TAU youth accessing out-patient treatment again after termination. The relative risk of youth who received PLL of accessing subsequent crisis services was 47.92%, with 8.45% of PLL youth compared to 26.35% of TAU youth returning to crisis services. PLL youth had a 22.58% relative risk of being hospitalized in an in-patient unit, with 2.70% of PLL youth compared to 8.78% of youth receiving TAU being hospitalized. Finally, PLL youth exhibited a 25.00% relative risk of participating in residential/alternate care placement after treatment termination, with 2.70 and 8.45% of PLL and TAU youth, respectively, receiving residential/alternate care placement after termination. All significance levels were $p<.001$.

Overall Reduction in Costs of Treatment

PLL's impact on the cost of mental health treatment in the Idaho CMH consists of two savings: (1) the difference in cost between PLL and TAU during the first course of treatment, and (2) the difference in the percentages of youth from each group who return to CMH (non-PLL) services after treatment completion. In Idaho, the CMH department includes both clinic-based and intensive community-based services. According to administrative records, CMH clinic-based TAU costs on average $3578 per youth and intensive community-based TAU costs on average $4940 (Justice Research Center 2009). PLL costs the state $1,616 per youth plus the amount paid to the therapist which would range between $764.61 and $1055.67, depending on whether the clinician is in the clinic-based or intensive community-based program. Since PLL then costs the state a total of between $2,380.61 and $2,671.67 per youth, savings from the initial course of treatment per youth ranges from $1,197.39 and $2,268.33. Aggregating over the 296 youth in the sample, cost savings from the initial course of treatment from utilizing PLL range from $354,426 to $671,425. The second cost savings is a consequence of the lower percentage of PLL youth compared to TAU youth who return to CMH services, or 39% compared to 94% respectively. Therefore, the per-youth average cost of subsequent treatment for PLL youth is between $1,395.42 (0.39 * $3,578) for returning to clinic-based services and $1,926.60 (0.39 * $4,940) for returning to community-based services. Since 94% of youth initially receiving TAU return to CMH treatment, the average cost of providing subsequent treatment to these youth ranges from $3,363.32 (0.94 * $3,578) for clinic-based and $4,643.60 (0.94 * $4,940) for intensive community-based services per youth. Therefore, the total cost savings per youth from the lower rates of return to treatment associated with PLL range from $1,967.90 ($3,363.32–$1,395.42) to $2,717.00 ($4,643.60–$1,926.60). Summed over the 296 youth who received PLL, the total average cost savings due to reduced rates of return to services ranges from $582,498.00 to $804,232. Therefore the total estimated savings to the state of Idaho resulting from providing PLL instead of TAU to

Table 6 Child behavior checklist (CBCL) analysis with sub-sample ($n = 156$) of PLL youth

CBCL scales	Pre-test		Post-test		Raw score change	t	p	Effect size
	Raw score M	t-score M	Raw score M	t-score M				
Internalizing								
Anxious	8.22	66	5.65	61	2.57	6.82	<0.001	0.49
Withdrawn	5.55	64	3.89	59	1.66	8.43	<0.001	0.53
Somatic	4.65	66	3.19	61	1.46	5.89	<0.001	0.40
Externalizing								
Rule breaking	11.92	68	8.35	64	3.57	9.49	<0.001	0.67
Aggressive	18.93	72	13.68	65	5.25	9.57	<0.001	0.64
Social problems	7.02	67	5.17	63	1.85	6.86	<0.001	0.44
Thought problems	6.97	68	5.16	66	1.81	6.46	<0.001	0.41
Attention problems	10.26	64	8.12	61	2.14	7.75	<0.001	0.44
Other problems	7.51	69	5.83	65	1.68	6.69	<0.001	0.42
Oppositional defiant	7.10	72	5.32	64	1.78	9.02	<0.001	0.69
Conduct problems	14.24	71	9.90	66	4.33	10.48	<0.001	0.69

Somatic somatic complaints, *Rule-breaking* rule-breaking behavior, *Aggressive* aggressive behavior, *Oppositional defiant* oppositional defiant problems

t-scores ≤ 64 = normal range, 65 ≤ t-scores ≤ 69 = borderline range, t-scores ≥ 70 = clinical range

296 youth, including savings from both shorter initial treatment duration and lower rates of return to treatment, ranges from $936, 925.00 to $1,475,657.

Within Group Analyses

Symptom Reduction in PLL Group

We were able to obtain pre- and post-CBCL scores from the CMH clinical records of a subsample of PLL graduates ($n = 156$). Consistent with predictions, after Bonferroni corrections for multiple tests, youth receiving PLL demonstrated statistically significant reductions in CBCL raw scores. Significant reductions were observed in all eleven problem scales or subscales examined, including rule breaking, ≤ aggressive, anxious, withdrawn, somatic complaints, social problems, thought problems, attention problems, other problems, oppositional defiant behavior, and conduct disorder, all $p < .001$ (see Table 6). With regard to clinical significance, the mean t-score for the Oppositional Problems sub-scale moved from the Clinical (i.e., t-score ≥ 70) to Normal (i.e., t-score ≤ 64) range from pre-test to post-test, and the mean scores on the Aggressive Behavior and Conduct Problems subscales each moved from the Clinical to the Borderline (i.e., 65 ≤ t-score ≤ 69) range. The mean t-scores for the Anxious, Somatic Complaints, Rule-Breaking Behavior, Social Problems, Thought Problems, and Other Problems subscales moved from the Borderline to the Normal range. Mean t-scores for the Withdrawn and Attention Problems subscales also decreased, but were in the Normal range at pre-test and remained so at post-test (see Table 6).

Discussion

The current study is part of a growing literature examining efforts to match mental health treatment service delivery to the realities of clinical presentation and availability of therapists in the community mental health workforce. Many public mental health systems are utilizing measures of functional impairment for assessment and treatment planning purposes (Barwick et al. 2014; Ebesutani et al. 2008), and coexisting internalizing and externalizing difficulties is more common than single types of difficulties among children and adolescents in community mental health treatment (Angold et al. 1999; Copeland et al. 2013). Moreover, youth exhibiting co-occurring internalizing and externalizing difficulties often experience longer treatment durations and return to treatment at higher rates than youth experiencing only one mental health difficulty (Hodges and Wotring 2000; Nobile et al. 2003; Riosa et al. 2011). In addition, community mental health systems are plagued by shortages of therapists in general, as well as therapists trained in evidence-based treatments (Fund 2010; Cummings et al. 2014), leading to waitlists and substantial percentages of youth who do not receive the mental health treatment they need. In recognition of this dynamic, the U.S. federal government recently passed the Excellence in Mental Health Act (S.264) to provide funding for eight

states to implement strategies to increase the efficiency of mental health service provision. We examined one approach, the use of an adapted structural-strategic family therapy-based intervention, with an emphasis on broad changes in the family system, of increasing efficiency of services to youth with co-existing internalizing and externalizing functional impairments. The study demonstrated that youth with co-existing difficulties who received Parenting with Love and Limits (PLL) returned to a variety of mental health services at significantly lower rates than those receiving treatment-as usual, including outpatient, crisis, inpatient, and residential/alternative services. Combined with its shorter duration, the lower rates of return to services resulted in the implementation of PLL saving the Idaho CMH system between $936, 925.00 and $1,475,657. Youth receiving PLL also evidenced a significant decrease in a whole host of psychological symptoms over the course of the intervention.

PLL resulted in lower rates of return to treatment than treatment-as-usual, and notably, about one-third of the risk of returning to intense, high-cost treatments, such as crisis stabilization and in-patient hospitalization. Since treatment-as-usual did not involve a manualized, combined multiple family group and family therapy intervention based on structural-strategic family systems theory, several aspects of PLL may have contributed to this finding. First, PLL includes a multiple family group component. Descriptions of multiple family group treatments have described them as providing opportunities to build a social support network related to a family member's difficulties (McDonnell & Dyck 2004; McKay et al. 1995). It is possible that families formed relationships with each other that allowed them to provide support and reinforcement of successful strategies after treatment termination Second, PLL explicitly focuses on improving emotional connections among family members, by increasing parental nurturance of children and resolving feels of hurt, along with increasing structure and healthy boundaries. Since an increase in family emotional connections can both increase a child's motivation to comply with parental instructions and also help decrease internalizing difficulties (Diamond et al. 2010; McMahon and Forehand 2005; Mufson et al. 1999), the focus in PLL on increasing parental nurturance may provide reinforcement and support for the maintenance of gains in both areas in the long-term. Similarly, since PLL targets multiple aspects of family functioning, families who have completed PLL also potentially may be able to rely on one area of improved family functioning, such as increased emotional closeness, to help offset negative consequences of relapse in another area of functioning, such as relaxing of family structure. Third, at least two sessions in the PLL intervention are related to relapse prevention. The multiple opportunities to plan for and practice ways to maintain treatment gains and avoid relapse may have given the families needed tools for minimizing setbacks and getting back on track. Finally, PLL therapists provide phone check-ins every 30 days for 3-months after a family terminates. Similar to the focus during the course of treatment on relapse prevention, this additional layer of support around maintenance of treatment gains once clients were no longer actively engaged in treatment may have allowed them to cope with difficulties without having to return to treatment.

In within-group pre-post-test analyses, youth receiving PLL demonstrated statistically and clinically significant reductions in symptoms, across multiple internalizing and externalizing problems. Although we were not able to compare these reductions with symptom change in the TAU group, and therefore could not rule out maturation or regression to the mean effects, these analyses do indicate that youth exhibited symptom reduction despite shorter treatment duration. In addition, multiple studies of community mental health care for youth have found that community mental health treatment is not associated with significant changes in psychological functioning over the course of treatment (Bellamy et al. 2010; Garland et al. 2013; Warren et al. 2010). Within this broader context, the findings related to symptom reduction in the current study take on potentially more significance. One possible reason for the symptom reduction observed is that PLL included structured activities to increase parental communication of expectations and family consensus on positive and negative consequences of behaviors, as well nurturance and positive communication between family members, which have been found to be helpful in reducing youth externalizing and internalizing symptoms, respectively (Barkley and Robin 2014; Diamond et al. 2002; Forgatch et al. 2013; Hughes and Asarnow 2011). Another potential reason is that PLL was developed from clinical practice with youth with conduct problems and has only been implemented in usual care, such as juvenile justice or child welfare, settings without efficacy trials (Sells 1998, 2000; Sells et al. 1995). The relative similarity between the context in which PLL was developed and the one in which it was implemented in this study may be partially responsible for the reduction in clinical symptoms. However, studies which compare decreases in symptoms for youth in a PLL group relative to a comparison group are necessary before causative links between PLL and symptom reduction can be made.

This study builds on a growing body of literature examining trans-diagnostic treatment, or treatment for comorbid psychological difficulties, which has mostly consisted of treatments for multiple disorders falling under the category of either internalizing or externalizing disorders, or has involved taking a client-centered approach to selecting and providing multiple treatment elements depending on the presentation of individual clients (Bullis et al.

2015; Chorpita et al. 2013; Weersing et al. 2012). This study extends this literature by examining the use of one cohesive model to specifically improve family structures and processes, which in turn can impact both internalizing and externalizing difficulties. Specifically targeting mechanisms that may have broad impacts on individual functioning could allow treatments to quickly be examined for effectiveness in that they apply to community mental health systems where it is common to see youth with functional impairments in both internalizing and externalizing domains. Future studies of PLL should examine the extent to which youth no longer meet diagnostic criteria for specific DSM 5 disorders after PLL treatment.

It is noteworthy that the sample in this study was split roughly evenly between youth from rural and urban geographic regions in both the PLL and TAU groups. Although the prevalence rates of most mental disorders do not differ greatly between children living in rural and non-rural communities, there is evidence that some psychosocial outcomes may be worse for rural teens (Eberhardt et al. 2001; Heflinger and Hoffman 2009). In addition, access to mental heath treatment in rural areas is often more limited than in urban communities, partly due to negative attitudes toward mental health treatment (Anderson et al. 2013; Cummings et al. 2014). Our study provides preliminary evidence that PLL can work in both rural and urban settings. The multiple family group component may help reduce stigma some rural families experience regarding mental health treatment.

Strengths and Limitations

This study possessed several strengths. Given this was an observational study, we used propensity score matching to control for confounding variables, a method that can approach the effectiveness of randomization in controlling for selection effects (Shadish 2013). Specifically, in the current study, propensity score matching allowed for the selection of a statistically similar comparison group based on the observed variables of demographic characteristics, as well as levels of emotional and behavioral problems. In addition, by using an intent-to-treat, approach we ensured that the course of treatment examined in this study represented the overall course of treatment in community mental health, instead of the course of treatment of just those who complete the intervention, thus increasing the generalizability of findings. We examined therapist adherence to the PLL model, which adds support to the idea that youth in the PLL group were actually receiving the PLL intervention, as opposed to a non-specific model of therapy or another treatment. This study also examined the implementation of an intervention throughout a state CMH system which can inform such a process for other large CMH systems.

Importantly, the process of clinician selection for PLL training, which included interested therapists applying to receive training and then participating in a pre-screening role-play activity, is a somewhat rigorous version of a recommendation by the implementation science literature. Specifically, according to the National Implementation Research Network model, staff implementing a new model should be selected according to whether they have certain general characteristics needed for successful execution of an evidence-based practice, such as comfort with the client population or with aspects of evidence-based practice, such as openness to feedback (Bertram et al. 2015). However, the somewhat stringent process used to select the PLL therapists indicates they were a particularly unique group of therapists, ones not only familiar with the population and open to evidence-based practice, but also willing to apply to receive training and comfortable with engaging in role-plays for evaluative purposes, which may limit generalizability of findings to other therapists. Future studies should consider a combination of therapist pre-screening and randomization, such as pre-screening for therapists who are comfortable with youth with co-existing difficulties and open to evidence-based practice, followed by randomization of the pre-screened therapists to receive training in PLL or a comparison condition. This would help differentiate the extent to which the intervention is effective across therapists eager and willing to put forth significant effort to be selected for training and those open to evidence-based practices but who are not as proactive.

This study was not without limitations. Although we used a propensity score matching procedure to statistically match the intervention to the TAU group on demographic and clinical functioning variables, it is not possible to remove all potential systematic differences between the two groups with this method, as would be possible with random assignment. An interesting finding was that the percentages of youth returning to some services was narrowly higher, 1% or less, for the subsample of youth who completed PLL (i.e., the protocol adherence subsample) compared to the subsample of all youth assigned to PLL (i.e., the intent-to-treat subsample). On the other hand, the difference in return rates to some services between the TAU sub-samples, both selected using propensity score matching, one for protocol adherence and the other for intent-to-treat analyses, varied by as much as 7%. This resulted in a slightly greater decrease for PLL youth in relative risk for return to services in the intent-to-treat compared to the protocol adherence approach to analyses. There is a potential that PLL has a slightly stronger effect among youth with fewer logistical resources available to complete treatment, such as transportation or financial means. However, future studies that take both an intent-to-treat and protocol adherence approach using randomization can provide additional

data to shed light on this finding. In addition, while the robust findings regarding internalizing and externalizing symptom reduction over the course of PLL treatment are noteworthy, future studies should collect pre- and post-test data on symptoms for both the intervention and an active control group to control for common factors of therapy (Messer and Wampold 2002), as well as other threats to internal and external validity. In addition, consistent with its widespread use in community mental health systems (Bates et al. 2006), the CAFAS, a measure of functional impairment but not symptomatology, was used to assess clinical functioning across youth in the Idaho CMH receiving PLL and TAU. Thus, the findings in this study related to treatment duration, return-to-service rates, and treatment cost pertain to youth with functional impairments in internalizing and externalizing domains, theorized to be a result of symptoms in those domains (Fitch and Grogan-Kaylor 2012; Hodges et al. 2004), but they are not exactly generalizable to youth exhibiting comorbid symptoms.

In addition, we were not able to collect data regarding the therapeutic approach implemented in TAU, instead relying on personal communications to provide information regarding the comparison condition. As a result, there are limitations to the confidence that can be placed in potential mechanisms that could have been at work in the PLL intervention compared to TAU. This study also utilized parent-report of child symptomatology and case manager report of functional impairments. Future studies of PLL should include youth self-report to provide a complementary view of youth functioning. Finally and relatedly, the fact that this study analyzed data originally collected for clinical and administrative purposes resulted in some information, such as CBCL scores and fidelity ratings, not being collected in as systematic or thorough fashion as perhaps would have been the case had the data been collected for research purposes. Future research on PLL should examine the role of adherence to the model in changes in client functioning. An additional potential implication is for scholars to continue to examine practical strategies for gaining buy-in from CMH system administration officials for the comprehensive evaluation of implemented evidence-based treatments, including system-wide evaluation of both client symptoms and functional impairments, as well as therapist characteristics and supervision processes.

Conclusions

Compared to TAU, the implementation of PLL took about one-fifth of the time and led to fewer clients returning to treatment. In addition to federal pressures for increased efficiency in mental health care, such as the Excellence in Mental Health Act, (NCBH 2015), the literature on child mental health, demands of managed care organizations, and national mental health policy forums are increasingly highlighting the importance of the utilization of evidence based treatments in community mental health (Hoagwood et al. 2014; Miranda et al. 2010; NCBH 2015). In this climate of increased pressure and accountability for efficient and effective mental health services, the implementation by public mental health systems of treatment models that produce significant effects in shorter amounts of time, such as PLL, is vastly important. Findings from the current study with regard to shorter treatment duration and lower rates of return to services begin to suggest that adoption of PLL in mental health systems may result in more children and adolescents being served by creating space on caseloads for therapists to see additional families.

As this was the first study to examine PLL in a sample of youth receiving services in a community mental health system, this study needs to be replicated in other mental health system-involved samples to lend more credence to the findings. Future research is particularly needed to develop comprehensive knowledge about the active ingredients of PLL that lead to improved outcomes. For example, an empirical examination of whether PLL leads to greater shifts in the mechanisms of change put forth by structural-strategic family systems theory, namely increased ability of families to disrupt problematic interactions, increased levels of healthy family structure, and increased emotional closeness between family members, relative to a comparison condition is an important next step in elucidating reasons for the effectiveness of PLL. An examination of moderators (e.g. youth gender) of PLL's effectiveness is also important for future research. In addition, research should examine the cost and time savings of other approaches and enhancements to treatment of youth with coexisting internalizing and externalizing disorders, such as increasing youth and family motivation to attend treatment to decrease no-show rates, tailoring treatment length to youth and family logistical ability to attend sessions (e.g., transportation, child care), and adjunctive tele-health. However, this study initially suggests that a highly concentrated, structural-strategic-based family intervention can treat youth with severe clinical presentations in a public mental health system effectively and efficiently.

References

Achenbach, T. M. & Rescorla, L. A. (2001). *Manual for the ASEBA school-age forms & profiles*. Burlington, VT: University of Vermont, Research Center for Children, Youth, & Families.

Achenbach, T. M., Rescorla, L. A., & Ivanova, M. Y. (2012). International epidemiology of child and adolescent psychopathology I: Diagnoses, dimensions, and conceptual issues. *Journal of*

the American Academy of Child & Adolescent Psychiatry, 51, 1261–1272. doi:10.1016/j.jaac.2012.09.010.

Anderson, N. J., Nuwirth, S. J., Lenardson, J. D. & Hartley, D. (2013). Rural children experience different rates of mental health diagnosis and treatment. Retrieved August 31, 2015, from http://muskie.usm.maine.edu/Publications/MRHRC/Rural-Children-Mental-Health_PolicyBrief.pdf.

Angold, A., Costello, E. J., & Erkanli, A. (1999). Comorbidity. *Journal of Child Psychology and Psychiatry, 40*, 57–87.

Barker, E. D., Oliver, B. R., & Maughan, B. (2010). Co-occurring problems of early onset persistent, childhood limited, and adolescent onset conduct problem youth. *Journal of Child Psychology and Psychiatry, 51*, 1217–1226. doi:10.1111/j.1469-7610.2010.02240.x.

Barkley, R. A., & Robin, S. L. (2014). *Defiant teen's: A clinician's manual for assessment and family intervention*. New York: Guilford.

Barwick, M. A., Urajnik, D. J., & Moore, J. E. (2014). Training and maintaining system-wise reliability in outcome management. *Journal of Child and Family Studies, 23*, 85–94. doi:10.1007/s10826-012.9694-x.

Bates, M. P., Furlong, M. J., & Green, J. G. (2006). Are CAFAS subscales and item weights valid? A preliminary investigation of the Child and adolescent functional assessment scale. *Administration and Policy in Mental Health & Mental Health Services Research, 33*, 682–695. doi:10.1007/s10488-006-0052-4.

Bearman, S. K., & Weisz, J. R. (2015). Review: Comprehensive treatments for youth comorbidity-evidence-guided approaches to a complicated problem. *Child and Adolescent Mental Health, 20*, 131–141. doi:10.1111/camh.12092.

Bellamy, J. L., Goapalan, G., & Traube, D. (2010). A national study of the impact of outpatient mental health services for children in long-term foster care. *Clinical Child Psychology and Psychiatry, 15*, 467–479. doi:10.1177/1359104510377720.

Bertram, R. M., Blase, K. A., & Fixsen, D. L. (2015). Improving programs and outcomes: Implementation frameworks and organization change. *Research on Social Work Practice, 25*, 477–487. doi:10.1177/1049731514537687.

Bilek, E. L., & Ehrenreich-May, J. (2013). An open trial investigation of a tansdiagnostic group treatment for children with anxiety and depressive symptoms. *Behavior Therapy, 43*, 887–897. doi:10.1016/j.beth.2012.04.007.

Billings, J., & Mijanovich, T. (2007). Improving the management of care for high-cost medicaid patients. *Health Affairs, 26*, 1643–1654.

Borrelli, B., Sepinwall, D., Ernst, D., Bellg, A. J., Czajkowski, S. Breger, R. … Orwig, D. (2005). A new tool to assess treatment fidelity and evaluation of treatment fidelity across 10 years of health behavior research. *Journal of Consulting and Clinical Psychology, 73*, 852–860. doi:10.1037/0022-006X.73.5.852.

Bullis, J. R., Sauer-Zavala, S., Bentley, K. H., Thompson-Hollands, J., Carl, J. R., & Barlow, D. H. (2015). The unified protocol for transdiagnostic treatment of emotional disorders: Preliminary exploration of effectiveness for group delivery. *Behavior Modification, 39*, 295–321.

Centers for Disease Control and Prevention (CDC). (2013). Mental health surveillance among children-United States, 2005–2011. *Morbidity and Mortality Weekly Report (MMWR), 17*, 2013. Retrieved April 29, 2015, from http://www.cdc.gov/mmwr/preview/mmwrhtml/su6202a1.htm?s_cid=su6202a1_w.

Chase, R. M., & Eyberg, S. M. (2008). Clinical presentation and treatment outcome for children with comorbid externalizing and internalizing symptoms. *Anxiety Disorders, 22*, 273–282. doi:10.1016/j.anxdis.2007.03.006.

Children's Defense Fund. (2010). Mental health fact sheet. Retrieved September 22, 2015, from http://www.childrensdefense.org/library/data/mental-health-factsheet.pdf.

Chorpita, B. F., Weisz, J. R., Daleiden, E. L., Schoenwald, S. K., Palinkas, L. A., Miranda, J. … Gibbons, R. D. (2013). Long-term outcomes for the Child STEPs randomized effectiveness trial: A comparison of modular and standard treatment designs with usual care. *Journal of Consulting and Clinical Psychology, 81*, 999–109. doi:10.1037/a0034200.

Chu, B. C., Crocco, S. T., Esseling, P., Areizaga, M. J., Lindner, A. M., & Skriner, L. C. (2016). Transdiagnostic group behavioral activation and exposure therapy for youth anxiety and depression: Initial randomized controlled trial. *Behaviour Research and Therapy, 76*, 65–75. doi:10.1016/j.brat.2015.11.005.

Cicchetti, D. V. (1994). Guidelines, criteria, and rules of thumb for evaluating normed and standardized assessment instrumetns in psychology. *Psychological Assessment, 6*, 284–290. doi:10.1037/1040-3590.6.4.284

Copeland, W. E., Shanahan, L., Erkanli, A., Costello, E. J., & Angold, A. (2013). Indirect comorbidity in childhood and adolescence. *Frontiers in Psychiatry, 4*. doi:10.3389/fpsyt.2013.00144.

Crawley, S. A., Kendall, P. C., Benjamin, C. L., Brodman, D. M., Wei, C., Beidas, R. S. … Mauro, C. (2013). Brief cognitive-behavioral therapy for anxious youth: Feasibility and initial outcomes. *Cognitive and Behavioral Practice, 20*, 123–133. doi:10.1016/j.cbpra.2012.07.003.

Cummings, J. R., Wen, H., Ko, M., & Druss, B. G. (2014). Geography and the Medicaid mental health care infrastructure: Implications for health care reform. *JAMA Psychiatry, 70*, 1084–1090. doi:10.1001/jamapsychiatry.3013.377.

David-Ferdon, C., & Kaslow, N. J. (2008). Evidence-based psychosocial treatments for child and adolescent depression. *Journal of Clinical Child & Adolescent Psychology, 37*, 62–104. doi:10.1080/1537441070181765.

de Olivera, C. A., Cheng, J., Vigod, S., Rehm, J., & Kurdyak, P. (2016). Patient with high mental health costs incur over 30 percent more costs than other high-cost patients. *Health Affairs, 35*, 36–43. doi:10.1377/hlthaff.2015.0278.

Diamond, G. S., Reis, B. F., Diamond, G. M., Siqueland, L., & Isaacs, L. (2002). Attachment-based family therapy for depressed adolescents: A treatment development study. *Journal of the American Academy of Child and Adolescent Psychiatry, 41*, 1190–1196.

Diamond, G. S., Wintersteen, M. B., Brown, G. K., Diamond, G. M., Gallop, R., Shelef, K., & Levy, S. (2010). Attachment-based family therapy for adolescents with suicidal ideation: A randomized controlled trial. *Journal of the American Academy of Child & Adolescent Psychiatry, 49*, 122–131.

Eberhardt, M. S., Ingram, D. D., & Makuc, D. M. (2001). *Urban and rural health chartbook: Health United States 2001*. Hyattsville, MD: National Center for Health Statistics.

Eyberg, S. M., Nelson, M. M., & Boggs, S. R. (2008). Evidence-based psychosocial treatments for children and adolescents with disruptive behavior. *Journal of Clinical Child and Adolescent Psychology, 37*, 215–237. doi:10.1080/15374410701820117.

Fitch, D., & Grogan-Kaylor, A. (2012). Using agency data for evidence-based programming: A university-agency collaboration. *Evaluation and Program Planning, 35*, 105–112. doi:10.1016/j.evalprogplan.2011.08.004.

Forgatch, M. S., Patterson, G. R., & Gewirtz, A. H. (2013). Looking forward: The promise of widespread implementation of parent training programs. *Perspectives on Psychological Science, 8*, 682–694. doi:10.1177/1745691613503478.

Francis, S. E., Ebesutani, C., & Chorpita, B. (2012). Differences in levels of functional impairment and rates of serious emotional disturbance between youth with internalizing and externalizing disorders when using the CAFAS or GAF to assess functional impairment. *Journal of Emotional and Behavioral Disorders, 20*, 226–240. doi:10.1177/1063426610387607.

Garbacz, L. L., Brown, D. M., Spee, G. A., Polo, A. J., & Budd, K. S. (2014). Establishing treatment fidelity in evidence-based parent training programs for externalizing disorders in children and adolescents. *Clinical Child and Family Psychology Review, 17*, 230–247. doi:10.1007/s10567-014-0166-2.

Gardner, B. C., Burr, B. K., & Wiedower, S. E. (2006). Reconceptualizing strategic family therapy: Insights from a dynamic systems perspective. *Contemporary Family Therapy, 28*, 339–352. doi:10.1007/210591-006-9007-x.

Garland, A. F., Bickman, L., & Chorpita, B. F. (2010). Change what? Identifying quality improvement targets by invesigating usual mental health care. *Administration and Policy in Mental Health, 37*, 15–26. doi:10.1007/s10488-010-0279-y.

Garland, A. F., Haine-Schlagel, R., Brookman-Frazee, L., Baker-Ericzen, M., Trask, E., & Fawley-King, K. (2013). Improving community-based mental health care for children: Translating knowledge into action. *Administration and Policy in Mental Health, 40*, 6–22. doi:10.1007/s10488-012-0450-8.

Greenbereg, L. S., Ford, C. L., Alden, L. S., & Johnson, S. M. (1993). In-session change in emotionally-focused therapy. *Journal of Consulting and Clinical Psychology, 61*, 78–84. doi:10.1037/0022-006X.61.1.78.

Haley, J. (1976). *Problem solving therapy*. San Francisco: Jossey-Bass.

Haley, J. (1987). *Problem-solving therapy*, 2nd ed. San Francisco, CA: Jossey-Bass.

Have, T., Normand, S. T., Marcus, S., Brown, C. H., Lavori, P. & Duan, N. (2008). Intent-to-treat vs. non-intent-to-treat analyses under treatment non-adherence in mental health randomized trials. *Psychiatric Annals, 38*, 772–783.

Heflinger, C. A., & Hoffman, C. (2009). Double whammy? Rural youth with serious emotional disturbance and the transition to adulthood. *The Journal of Rural Health, 25*, 399–406. doi:10.1111/j.1748-0361.2009.00251.x.

Henggeler, S. W., & Sheidow, A. J. (2012). Empirically supported family-based treatments for conduct disorder and delinquency in adolescents. *Journal of Marital and Family Therapy, 38*(1), 30–58.

Hoagwood, K. E., Olin, S. S., Horwitz, S., McKay, M., Cleek, A., Gleacher, A. … Hogan, M. (2014). Scaling up evidence-based practices for children and families in New York State: Toward evidence-based policies on implementation for state mental health systems. *Journal of Clinical Child & Adolescent Psychology, 43*, 145–157. doi:10.1080/15374416.2013.869749.

Hodges, K. (1997). *CAFAS manual for training coordinators, clinical administrators, and data managers*. Ann Arbor, MI: Author.

Hodges, K., Doucette-Gates, A., & Liao, Q. (1999). The relationship between the child and adolescent functional assessment scale (CAFAS) and indicators of functioning. *Journal of Child and Family Studies, 8*, 109–122.

Hodges, K., & Wong, M. M. (1996). Psychometric characteristics of a multidimensional measure to assess impairment: The child and adolescent functional assessment scale. *Journal of Child and Family Studies, 5*, 445–467.

Hodges, K., & Wotring, J. (2000). Client typology based on functioning across domains using the CAFAS: Implications for service planning. *The Journal of Behavioral Health Servivcers & Research, 27*, 257–270. doi:10.1007/BF02291738.

Hodges, K., Xue, Y., & Wotring, J. (2004). Use of the CAFAS to evaluate outcome for youths with severe emotional disturbance served by public mental health. *Journal of Child and Family Studies, 13*, 325–339. doi:10.1023/B:JCFS.0000022038.62940.a3.

Horigian, V. E., Feaster, D. J., Robbins, M. S., Brincks, A. M., Ucha, J., Rohrbaugh, M. J. … Szapocznik, J. (2015). A cross-sectional assessment of the long term effects of brief strategic family therapy for adolescent substance use. *The American Journal on Addictions, 24*, 637–645. doi:10.1111/ajad.12278.

Hughes, J. L., & Asarnow, J. R. (2011). Family treatment strategies in adolescent depression. *Psychiatric Annals, 41*, 235–239. doi:10.3928/00485713-20110325-07.

Hyde, P. S. (2013). Report to congress on the nation's substance abuse and mental health workforce issues. Retrieved September 18, 2015, from https://store.samhsa.gov/shin/content/PEP13-RTC-BHWORK/PEP13-RTC-BHWORK.pdf.

Justice Research Center. (2009). Parenting with Love and limits (PLL) research evaluation: 2009–2010 Outcomes. Report to the Idaho Department of Health and Welfare Division of Behavioral Health.

Karam, E., Sterrett, E., & Kiaer, L. (in press). The integration of family and group therapy as an alternative to juvenile incarceration: A quasi-experimental evaluation using Parenting with Love and Limits (PLL). *Family Process*.

Knapp, M., McCrone, P., Fombonne, E., Beecham, J., & Wostear, G. (2002). The Maudsley long-term follow-up of child and adolescent depression: 3. Impact of comorbid conduct disorder on service use and costs in adulthood. *British Journal of Psychiatry, 180*, 19–23.

Krueger, R. F., Caspi, A., Moffitt, T. E., & Silva, P. A. (1998). The structure and stability of common mental disorders (DSM-III-R): A longitudinal-epidemiological study. *Journal of Abnormal Psychology, 107*, 216–227.

Lagomasino, I., Zatzick, D. F., & Chambers, D. A. (2010). Efficiency in mental health practice and research. *General Hospital Psychiatry, 32*, 477–483. doi:10.1016/j.genhosppsych.2010.06.005.

Manteuffel, B., Stephens, R., & Santiago, R. (2002). Overview of the national evaluation of the comprehensive community mental health services for children and their families program and summary of current findings. *Children's Services: Social Policy, Research, and Practice, 5*, 3–20.

McGuire, J. F., Piacentini, J., Lewin, A. B., Brennan, E. A., Murphy, T. A., & Storch, E. A. (2015). A meta-analysis of cognitive behavior therapy and medication for child obsessive–compulsive disorder: Moderators of treatment efficacy, response, and remission. *Depression and Anxiety, 32*, 580–593. doi:10.1002/da.22389.

McKay, M., Gonzales, J., Stone, S., Ryland, D., & Kohner, K. (1995). Multiple family therapy groups: A responsive intervention model for inner-city families. *Social Work With Groups, 18*, 77.

McMahon, R. J., & Forehand, R. L. (2005). *Helping the noncompliant child, 2nd edition: Family-based treatment for oppositional behavior*. New York, NY: Guilford Press.

Mental Health America (2015). Parity or disparity: The state of mental health in America. Retrieved August 20, 2015, from http://www.mentalhealthamerica.net/sites/default/files/Parity%20or%20Disparity%202015%20Report.pdf.

Merikangas, K. R., He, J., Brody, D., Fisher, P. W., Bourdon, K., & Koretz, D. S. (2010). Prevalence and treatment of mental disorders among US children in the 2001–2004 NHANES. doi:10.1542/peds.2008-2598.

Messer, S. B., & Wampold, B. E. (2002). Let's face facts: Common factors are more potent than specific therapy ingredients. *Clinical Psychology: Science and Practice, 9*, 21–25.

Minuchin, S. (1974). *Families and family therapy*. Cambridge, MA: Harvard University Press.

Miranda, J., Azocar, F., & Burnam, M. A. (2010). Assessment of evidence-based psychotherapy practices in usual care: Challenges, promising approaches, and future directions. *Administration and Policy in Mental Health and Mental Health Services Research, 37*, 205–207.

Morbidity and Mortality Weekly Report. (2013). Mental health surveillance among children-United States, 2005–2011.

Mufson, L., Weissman, M. M., Moreau, D., & Garfinkel, R. (1999). Efficacy of interpersonal psychotherapy for depressed adolescents. *Archives of General Psychiatry, 56*, 573–579.

Nakamura, B., Ebesutani, C., Bernstein, A., & Chorpita, B. F. (2009). A psychometric analysis of the Child Behavior Checklist DSM-Oriented Scales. *Journal of Psychopathology and Behavioral Assessment, 31*, 178–189. doi:10.1007/s10862-008-9119-8.

National Alliance on Mental Illness (2011). State mental health cuts: A national crisis. Retrieved September 18, 2015, from https://www2.nami.org/ContentManagement/ContentDisplay.cfm?ContentFileID=125018.

National Alliance on Mental Illness (2014). State mental health legislation 2014: Trends, themes and effective practices. Retrieved September 18, 2015, from https://www.nami.org/legreport2014.

National Council for Behavioral Health (2015). Excellence in Mental Health Act: Why is it important to apply? Retrieved September 29, 2015, from http://www.thenationalcouncil.org/capitol-connector/2015/06/excellence-mental-health-act-important-apply/.

National Institute of Mental Health. (2001). *Blueprint for change: Research on child and adolescent mental health*. Rockville, MD: U.S. Department of Health and Human Services, Administration, Center for Mental Health Services, National Institutes of health, National Institute of Mental Health.

Nichols, M. P. (2012) *Family therapy: Concepts and methods* (10th ed.). Upper Saddle River, NJ: Prentice Hall.

Nobile, M., Cataldo, G. M., Marino, C., & Molteni, M. (2003). Diagnosis and treatment of dysthymia in children and adolescents. *CNS drugs, 17*, 927–946.

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 Academyof Child & Adolescent Psychiatry, 52*, 1009–1025. doi:10.1016/j.jaac.201.07.012.

Peterson, S., Williams, I. C., Hauenstein, E. J., Rovnyak, V., & Merwin, E. (2009). Race and ethnicity and rural mental health treatment. *Journal of Health Care for the Poor and Underserved, 20*, 662–677.

Pires, S. A., & Stroul, B. A. (2013). *Making Medicaid work for children in child welfare: Examples from the field*. Hamilton, NJ: Center for Health Care Strategies.

Riosa, P. B., McArthur, B. A., & Preyde, M. (2011). Effectiveness of psychosocial intervention for children and adolescents with comorbid problems: A systematic review. *Child and Adolescent Mental Health, 16*, 177–185. doi:10.1111/j.1475-3588.2011.00609.x.

Rosenblatt, A., & Rosenblatt, J. (2000). Demographic, clinical, and functional characteristics of youth enrolled in six California systems of care. *Journal of Child and Family Studies, 9*, 51–66. doi:10.1023/A:1009459615496.

Rubin, D. B., & Thomas, N. (2000). Combining propensity score matching with additional adjustments for prognostic covariates. *Journal of the American Statistical Association, 95*, 573–585. doi:10.1080/01621459.2000.10474233.

Santisteban, D. A., Coatsworth, J. D., Perez-Vidal, A., Mitrani, V., Jean-Gilles, M., & Szapocznik, J. (1997). Brief structural/strategic family therapy with African American and Hispanic high-risk youth. *Journal of Community Psychology, 25*, 453–471.

Santisteban, D. A., Suarez-Morales, L., Robbins, M. S., & Szapocznik, J. (2006). Brief strategic family therapy: Lessons learned in efficacy research and challenges to blending research and practice. *Family Process, 45*, 259–271. doi:10.111/j.1545-5300.2006.00094.x.

Sells, S. P. (1998). *Treating the tough adolescent: A step-by-step, family-based guide*. New York: Guilford Press.

Sells, S. P. (2000). *Parenting your out-of-control teenager*. New York: St. Martin's Press.

Sells, S. P. & Souder, E. (2016). Psychometrics of the video supervision manual checklist of therapist fidelity to parenting with love and limits. Unpublished manuscript.

Sells, S. P., Smith, T. E., Rodman, J., & Reynolds, L. R. (2003). Reducing adolescent substance abuse and delinquency: Pilot researh of a family-oriented psychoeducation curriculum. *Journal of Child and Adolescent Substance Abuse, 15*, 105–115. doi:10.1300/J029v15n04_06

Sells, S. P., Smith, T. E., & Sprenkle, D. H. (1995). Integrating quantitative and qualitative methods: A research model. *Family Process, 34*, 199–218.

Sells, S. P., Winokur-Early, K., & Smith, T. E. (2011). Reducing adolescent oppositional and conduct disorders: An experimental design using parenting with love and limits. *Professional Issues in Criminal Justice, 6*, 9–30.

Shadish, W. R. (2013). Propensity score analysis: Promise, reality, and irrational exuberance. *Journal of Experimental Criminology, 9*, 129–144.

Soni, A. (2009). *The five most costly children's conditions, 2006: Estimates for the U.S.civilian noninstitutionalized children, ages 0–17* [Statistical Brief #242). Rockville, MD: Agency for Healthcare Research and Quality. Retrieved August 31, 2015 from http://meps.ahrq.gov/mepsweb/data_files/publications/st242/stat242.pdf.

Souder, E. (2011). *Parenting with love and limits model fidelity policy and procedures manual*. Mansfield, OH.

Souder, E., & Sells, S. (2016). Supervision and fidelity measurement model in parenting with love and limits. Unpublished manuscript.

Stavrianopoulos, K., Faller, G., & Furrow, J. L. (2014). Emotionaly focused family therapy: Facilitating change within a family system. *Journal of Couple & Relationship Therapy, 13*, 25–43. doi:10.1080/15332691.2014.865976.

Substance Abuse and Mental Health Services Administration. (2011). *Identifying mental health and substance use problems of children and adolescents: A guide for childserving organizations*. Rockville, MD: HHS Publication (No. SMA 12–4670)

Szapocznik, J., & Williiams, R. A. (2000). Brief strategic family therapy: Twenty-five years of interplay among theory, research and practice in adolescent behavior problems and drug abuse. *Clinical Child and Family Psychology Review, 3*, 117–134.

Tolan, P. H. (1989). Guidelines and pitfalls: Applying structural-strategic approaches in a multiple level perspective. *Journal of Psychotherapy & the Family, 6*, 151–156.

U.S. Census. (2014). State and county quickfacts: Idaho. Retrieved October 15, 2015, from http://quickfacts.census.gov/qfd/states/16000.html.

Warren, J. S., Nelson, P. L., Mondragon, S. A., Baldwin, S. A., & Burlingame, G. M. (2010). Youth psychotherapy change trajectories and outcomes in usual care: Community mental health versus managed care settings. *Journal of Consulting and Clinical Psychology, 78*, 144–155. doi:10.1037/a0018544.

Weersing, V. R., Rozenman, M. S., Maher-Bridge, M., & Campo, J. V. (2012). Anxiety, depression, and somatic distress: Developing a transdiagnostic internalizing toolbox for pediatric practice. *Cognitive and Behavioral Practice, 19*, 68–82.

Weisz, J. R., McCarty, C. A., & Valeri, S. M. (2006). Effects of psychotherapy for depression in children and adolescents: A meta-analysis. *Psychological Bulletin, 132*, 132–149. doi:10.1037/0033-2909.132.1.132.

Winokur-Early, K. W., Chapman, S. F. & Hand, G. A. (2013). Family-focused juvenile reentry services: A quasi-experimental design evaluation of recidivism outcomes. *Journal of Juvenile Justice, 2*, 1–22.