PREMATURE TERMINATION AND FAMILY FUNCTIONING: PREDICTORS AND OUTCOMES OF TREATMENT COMPLETION FOR COURT-INVOLVED PARENT—CHILD DYADS

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ABSTRACT

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Court-involved adolescents represent a high-risk and high-needs population. Services provided to this population aim to improve individual and family functioning as well as reduce recidivism. However, court-involved adolescents are at increased risk of premature termination from services, reducing the likelihood of treatment effectiveness. The current study aimed to investigate family functioning as a variable potentially impacting treatment completion. Analyses involved data drawn from a program evaluation of Functional Family Therapy, which has been hailed as an effective treatment for court-involved families. Looking at measures of relationship quality and parental monitoring, this investigation considered the differential ability of parent report and child report to predict treatment completion, as well as the significance of agreement between parent and child reports. Differences in recidivism outcomes for those who did and did not complete treatment were also explored. Results suggested that parent report of family functioning, particularly relationship quality, may serve as a useful predictor of treatment completion, though significant interactions indicated that parent report must be considered in relation to child report. In contrast to anticipated findings, parent—child agreement alone did not appear to predict treatment completion, highlighting the need to interpret informant discrepancies within the context of the construct being measured. Finally, higher levels of treatment completion were associated with lower levels of recidivism, offering support for the effectiveness of FFT and underscoring the need to further understand factors which inform treatment engagement.

Keywords: Functional Family Therapy, premature termination, drop-out, treatment completion, court-involved youth, parent—child agreement

For my beautiful, wacky family.

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TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

INTRODUCTION

Premature termination of treatment is a pervasive problem in the field of mental health. Although reported rates and operationalizations vary across studies, there exists a consensus within the published literature that premature termination is widespread and impedes the effectiveness of therapy. The majority of research to date focuses on premature termination among individual clients, but the subject gains additional nuance when treatments involving multiple people are considered – especially among at-risk populations. For adolescents involved in the juvenile court system, therapeutic services have the joint goal of improving individual and family functioning and reducing recidivism. Premature termination from such services therefore has implications not only for clients and mental health professionals, but also for the larger community. Exploring predictors and outcomes of treatment completion among court-involved youth helps to improve existing services to better meet the needs of this population.

The current study aimed to investigate family functioning in court-involved youth as a variable potentially impacting treatment completion. Analyses involved data drawn from a program evaluation of Functional Family Therapy (discussed below). This investigation considered the differential ability of parent-report and child-report measures on both relationship quality and parental monitoring to predict treatment completion, as well as the significance of agreement between parent and child reports. Differences in recidivism outcomes for those who did and did not complete treatment were also explored. The study is contextualized within the following review of research conducted on premature termination and family therapy dynamics.

Operationalization and Prevalence of Premature Termination

Premature termination can be generally defined as withdrawal from a treatment which has been started but not fully completed. Attempts to understand the nature and scope of this

problem, though, are hindered by marked variation in operationalization across research studies – a difficulty frequently noted by the researchers themselves. Armbruster and Kazdin (1994, p. 90) used the term "definitional chaos" to describe the inconsistencies which characterize the premature termination literature; Reis and Brown (1999) referred to the "definition problem" in noting the high heterogeneity of clients classified as premature terminators based on different conceptualizations of the construct. Across various studies, premature termination is alternatively referred to as therapy dropout, attrition, early withdrawal, treatment noncompletion, unilateral termination, and discontinuation (e.g., Cooper & Conklin, 2015; Karlson & Rapoff, 2009; Barrett et al., 2008; McMurran & Theodosi, 2007; Reis & Brown, 1999; Swift & Greenberg, 2012). Implicit in all these terms is the assumption that therapy was ended inappropriately early, but uncertainty seems to arise from varying interpretations of what it means to fully complete a therapeutic treatment. Indeed, Hatchett and Park (2003) raised the possibility that "the various definitions of premature termination measure qualitatively different constructs." An overview of these definitions will help contextualize discussion and understanding of the prevalence of the problem. Broadly speaking, therapy completion has been operationalized along the following metrics for the purpose of premature termination research: treatment duration, treatment attendance, therapist judgment, and clinically significant change.

Defining Premature Termination by Treatment Duration

The duration of treatment required for completion in studies which follow this method may be specified by a treatment protocol or be determined for the purposes of a given study by the researchers.

In cases where a treatment protocol is used, a client would be considered a premature terminator if they failed to complete the full protocol; this fits logically within the general

definition of premature termination (Swift & Greenberg, 2012). For example, Kazdin and colleagues (1994) classified premature termination as failure to complete an entire treatment regimen, which involved several months of sessions following a set course of topics and themes. Alternatively, the protocol might be broken down into its composite phases to provide a more detailed indication of when clients discontinued. For instance, in a family-based intervention for overweight and obese adolescents, premature terminators were defined as clients who did not complete the treatment and maintenance phases of the intervention (Brennan et al., 2012).

When necessary treatment duration is determined by the researchers rather than a prescribed protocol, this decision is sometimes based on the behavior of the study sample. In a comparison of different classification methods for premature termination, Hatchett and Park (2003) employed the median-split procedure as one of their estimates; the participants in their study completed a median number of four sessions, so they classified those who completed fewer than four sessions as terminating prematurely and those who completed four or more sessions as terminating appropriately.

In other cases where participation in a specific number of sessions is used as the completion rubric, researchers base their decision on the assumption that clients require a certain amount of therapy in order to improve. This rationale is grounded in the dose-effect literature, which explores the relationship between the number of sessions a client completes (the "dose" of therapy) and the relief in their presenting symptoms (Howard et al., 1986). Early estimates suggested that 50% of patients noticeably improved after completing 8 sessions; after 26 sessions, the percentage of improved patients increased to 75% (Howard et al., 1986). Subsequent research which applied this principle to the performance of actual outpatients in therapy yielded lower estimates, with approximately 22% of patients significantly improved after

8 sessions (Kadera et al., 1996). A more recent review of controlled clinical trials suggested that, within clinical trials, between 57.6% and 67.2% of patients show improvement within an average of 12.7 sessions (Hansen et al., 2002). However, data drawn from a national database indicated that, in a naturalistic setting, the average patient receives less than five therapy sessions, with an improvement rate of about 20% (Hansen et al., 2002).

Such estimates may inform research decisions about how many sessions are required for effective completion of therapy, but there is still notable variability between studies which use this definition. In a review of the literature on attrition, Barrett and colleagues (2008) called attention to the wide range of cut-off decisions that can be found within such studies, noting one study in which termination within the first nine months of therapy was considered premature and another in which failure to return after an intake assessment was the standard for dropout (Frayn, 1992; Longo et al., 1992). This variability in acceptable treatment duration across studies is no doubt influenced by the settings and modalities of the treatments being administered; Frayn's study included a large percentage of clients engaged in psychoanalysis, a therapy known for its lengthy process, while Longo and colleagues reported on students who sought treatment at a university counseling center, presumably a more short-term setting. Nevertheless, discrepancies such as these make generalized estimates of drop-out rates difficult.

It is also worth noting that the topography of improvement over time is rarely uniform. In one of the seminal dose-effect studies, Howard and colleagues (1986) noted that adults with different disorders seemed to respond to treatment at different rates; those in the depression group, for instance, began to show improvement earlier in treatment than those with anxiety, who in turn showed improvement earlier than those with borderline-psychotic disorders. Even within a given disorder or treatment population, improvement rates may vary across specific

symptoms. In a study of psychotherapy response in depressed clients, results indicated that the acute, chronic, and interpersonal components of depression all responded to treatment at different rates (Barkham et al., 1996). Maling and colleagues (1995) found that among patients engaged in outpatient therapy, different facets of interpersonal problems showed different response patterns over 38 sessions of treatment; on average, symptoms related to control began to show improvement at session 10, symptoms related to detachment started to improve at session 17, and symptoms related to self-effacement did not show any improvement. Thus, studies which define completion based on a specified number of sessions should be considered with the knowledge that different amounts of treatment may be differentially effective for certain symptoms and populations.

Defining Premature Termination by Treatment Attendance

In studies which operationalize premature termination according to treatment attendance, the emphasis is placed on whether a client attended sessions as scheduled, rather than the number of sessions attended. Swift and Greenberg (2012) noted this method in their meta-analysis as encompassing clients who fail to attend a scheduled session and do not reschedule or attend future appointments. This method follows the logic that, if a client initially agreed to attend a session, they intended to continue with therapy, and failure to attend that session indicates an earlier termination than planned. For example, a study conducted at a university marriage and family therapy clinic defined premature termination as “no show” after attending at least one session (Bartle-Haring et al., 2007). This operationalization has the advantage of high reliability, although Hatchett and Park (2003) noted that it may be tapping into constructs besides premature termination, such as avoidance of termination issues or lack of conscientiousness.

Defining Premature Termination by Therapist Judgment

A third method of defining premature termination is by therapist judgment. By this definition, a client would be considered a premature terminator if the therapist believed they withdrew from treatment too early (Swift & Greenberg, 2012). Masi and colleagues (2003) drew completion data from termination forms at a marriage and family therapy clinic; therapists were given the option of reporting that "client dropped out" in response to a question about initiation of termination, and in another question could report that "goals for therapy were not completed." Either of these responses resulted in the client being classified as a premature terminator. In another study, Pekarik and Stephenson (1988) defined dropouts as clients who unilaterally terminated treatment – that is, made the decision independently, not through mutual agreement with the therapist – and who, in the view of the therapist, needed additional treatment. Such operationalizations offer high face validity, as pointed out by Wierzbicki and Pekarik (1993). However, because views on the nature and goals of therapy may differ between therapists – and between therapists and clients – this method runs the risk of low reliability, and also may not reflect the satisfaction or functioning of the client ending treatment (Hatchett & Park, 2003).

Defining Premature Termination by Clinically Significant Change

In response to the limitations of therapist judgment, some more recent studies use objective measures of client functioning as the basis for defining premature termination. This is the method proposed by Hatchett and Park (2003) at the conclusion of their comparison of previously existing definitions of the construct. Under this approach, clients would compete an inventory of symptoms at every session; their scores on the inventory at their last attended session would be used to establish whether or not they terminated prematurely. Swift and colleagues (2009) put this proposal into practice, using criteria of clinically significant change

and (as a less stringent alternative) reliable change to classify the termination status of clients at a university-based clinic. Classification criteria were drawn from the manual of the chosen outcome measure, in which reliable change was defined as a change of 14 points and clinically significant change was defined as a reliable improvement which resulted in a score within the nonclinical range. Swift and colleagues (2009) noted the face validity and reliability of the approach.

However, both sets of researchers also noted the limitations of defining premature termination solely based on measures of symptom reduction (Hatchett & Park, 2003; Swift et al., 2009). For instance, traditional inventory measures may not completely reflect the client's reasons for seeking therapy or the agreed-upon goals for treatment. Additionally, some clients might present with problems with symptoms that would not be expected to shift from the clinical to the normal range – either because their chronicity would likely keep them in the clinical range, or because their initial lack of severity would place their baseline in the normal range. Furthermore, this method runs the risk of classifying as premature terminators individuals who engaged with a full course of treatment but whose symptoms did not change.

Comparison of Premature Termination Definitions

Each of these operationalizations has attendant strengths and limitations; future studies may do well to follow the suggestion of Swift and colleagues (2009) and include multiple metrics (for instance, an objective inventory of clinically significant change in combination with therapist judgment) in assessing premature termination. Within the current literature, a handful of studies have conducted comparisons of the more traditional definitions to provide context for the interpretation of existing prevalence rates. Pekarik (1985) applied the definitions of median-split (with a median of five visits) and of therapist judgment to an outpatient sample and

compared the resulting groups of completers and dropouts on a variety of client and therapist variables. He found that the groups resulting from therapist judgment were significantly different on 11 of the 18 comparison variables, while the groups classified based on duration criteria exhibited no significant differences. Based on the assumption that significant differences should exist between completers and dropouts, he concluded that therapist judgment was the superior approach for distinguishing between these groups. Wierzbicki and Pekarik (1993), in one of the first meta-analyses on the topic, found that dropout rate differed significantly depending on how dropouts were defined. Using the methods of therapist judgment or duration resulted in higher dropout rates than using the definition of attendance (that is, failure to attend a scheduled session).

Hatchett and Park (2003) conducted a direct comparison of four premature termination definitions: median-split procedure, failure to return after intake, failure to attend the last scheduled appointment, and therapist judgment. Each definition was applied to the same study population. Of the four, only therapist judgment and missed last appointment demonstrated significant agreement; all other comparisons had kappa coefficients with only low-to-fair agreement. Premature termination rates ranged from 17.6% (failure to return after intake) to 53.1% (median-split procedure), with therapist judgment and missed last appointment yielding rates in the middle (both 40.8%). Following up on this study, Swift and colleagues (2009) applied the same four definitions to a university-based clinic sample and added the fifth definition of clinically significant change. Premature termination according to the clinically significant change definition was observed at a rate of 77%, but kappa coefficients between this and the other four definitions were nonsignificant. Significant kappa coefficients were found, however, between the therapist judgment and missed last appointment methods, as well as

between the median-split and failure to return after intake methods. These studies lend credibility to the possibility that different definitions of premature termination are often tapping into distinct constructs and reinforce the caution with which the following prevalence rates should be interpreted.

Prevalence Estimates of Premature Termination

Prevalence estimates of premature termination from psychotherapy are widely varied, likely due at least in part to the definitional issues noted above. In an early review of the literature, which at the time comprised some 360 studies, Baekeland and Lundwall (1975) reported that rates of withdrawal after intake ranged from 20% to 57%. Wierzbicki and Pekarik's (1993) meta-analysis of 125 studies found a mean dropout rate of 46.86%, though as reported above, the definition of dropout was found to significantly influence the observed rate. Premature termination according to therapist judgment and number of sessions completed yielded very similar rates (48.43% and 48.23%, respectively), but using failure to attend a scheduled session as the criterion resulted in a rate of 35.87%.

In a more recent meta-analysis, Swift and Greenberg (2012) examined 669 studies using a random effects model and found a weighted dropout rate of 19.7%. In discussing this apparent decrease in dropout rate compared to Wierzbicki and Pekarik's (1993) study, the authors noted that they found no actual evidence that fewer clients were dropping out of treatment more recently compared to the time of the earlier review; analyses indicated no relationship between year of publication and premature termination. Rather, they suggested that their updated search strategies and data analytic techniques may have allowed for a more comprehensive and accurate reflection of the existing research. For instance, studies found through hand search had a lower average dropout rate than studies found through keyword search (the approach which matched

Wierzbicki and Pekarik's strategy). Additionally, Swift and Greenberg (2012) were able to assign weights and degrees of freedom to different studies, while the earlier review was limited to calculating simple averages. Once again, though, this prevalence rate was moderated by the definition of dropout. Based on the operationalizations used by the original authors, Swift and Greenberg assigned each of the included studies to one of the following definitional categories: failure to complete a treatment protocol ($k = 314$), failure to attend a certain number of sessions ($k = 131$), therapist judgment ($k = 63$), and cessation of attendance ($k = 45$). The first two categories demonstrated almost identical rates of premature termination (18.4% and 18.3%, respectively), with cessation of attendance yielding a higher rate (24.4%) and therapist judgment going higher still (37.6%). That same study also revealed significant differences in dropout rates across diagnoses. Premature termination rates for clients with a psychotic disorder, anxiety disorder, or mood disorder ranged from 16.1% to 17.4%, noticeably lower than the rates for clients with an eating disorder (23.9%) or a personality disorder (25.6%) (Swift & Greenberg, 2012).

In addition to these meta-analyses, some nationally representative surveys offer another perspective on the scope of premature termination. A sample of 1,664 adults was drawn from the National Comorbidity Survey Replication; participants had all been enrolled in mental health treatment in the 12 months prior to being interviewed (Olfson et al., 2009). Premature termination was defined as withdrawing from treatment before the provider wanted. According to this definition, 22.4% of patients terminated prematurely, with over 70% of withdrawals taking place after the first or second visits (Olfson et al., 2009). In Canada, a similar study looked at a sample of 3,556 adults who had used mental health services in the past 12 months, with data drawn from the Canadian Community Health Survey—Mental Health—Well-being

(Wang, 2007). The definition used here was cessation of contact with the mental health professional for reasons other than treatment completion or abatement of symptoms. This study yielded a premature termination rate of 22.3% (Wang, 2007).

Based on these findings, one could reasonably (and perhaps conservatively) estimate that the average rate of premature termination falls around 20%. Put another way, roughly one in five clients enrolled in psychotherapy withdraws before receiving the full benefit of treatment.

Premature Termination in At-Risk Populations

The prevalence estimates cited above are based on large reviews and national surveys, and provide a broad indication of the scope of premature termination. It is also important to consider how premature termination rates may differ in higher-risk populations, including court-referred youth and other youth with disruptive behavior disorders and substance abuse. Ohio's Behavioral Health Juvenile Justice program provides behavioral health services for court-involved youth. An encouraging analysis of their program indicated that only 6.4% of the sample actively dropped out of services, although other termination reasons (e.g., out-of-home placement) brought the actual completion rate down to 67.1% (Kretschmar et al., 2016). In a meta-analysis of studies on juvenile drug treatment court, which defined premature termination as failure to graduate from drug court, results were somewhat less promising. The unweighted mean premature termination rate was 49%, with a weighted mean of 46% (Stein et al., 2013). There is some question of whether legal coercion may play a role in dropout from drug court treatments. Hepburn and Harvey (2007) compared two adult courts; one court utilized the threat of sentencing to compel program participation, while the other court was prohibited from doing so. This study found no difference between the two courts in program completion; 72.1% of the first court and 76.1% of the second failed to fully complete treatment, and rate of attrition over

the course of treatment did not significantly differ between them (Hepburn & Harvey, 2007). However, in a national survey on the same topic, Perron and Bright (2008) found legal coercion to significantly impact dropout rates in short-term and long-term residential and outpatient treatments; dropout rates ranged from 27.7% (short-term residential) to 64.8% (outpatient).

Outside of the court system, children and adolescents with externalizing behavior problems may also be at particular risk for premature treatment termination. In a study of adolescents (12-17 years) who met criteria for conduct disorder, 27% of clients discontinued Multisystemic Therapy (MST) for reasons other than mutual agreement between caregivers and the treatment team (Löfholm et al., 2009). Looking at a somewhat younger sample, Prinz and Miller (1994) examined premature termination (defined as failure to complete the full course of treatment) among families with a markedly aggressive child (4-9 years). Those receiving standard family treatment dropped out at a rate of 46.7%, while those receiving enhanced family treatment (which included supportive discussions with parents on topics not directly related to the intervention) dropped out at a rate of 29.2%. In an analysis of families referred for child management problems, 33% withdrew from treatment before completing at least five sessions (Chamberlain et al., 1984). Adjacent to the realm of therapy, though perhaps not directly comparable, a nation-wide analysis of mentoring services revealed that mentees (6-19 years old) with anger or aggression problems were at elevated risk for premature closure; 48.0% of youth with anger problems and 51.0% with aggression problems terminated their mentoring relationship prematurely, compared to 38.1% in the total sample (Kupersmidt et al., 2017).

These estimates, in spite of the variation between them, indicate that youth who exhibit externalizing behavior problems or who are involved in the justice system may disengage from treatment at an even higher rate than the general population of individuals in treatment.

Impact of Premature Termination

Having established the notable occurrence of premature termination from psychotherapy – particularly in at-risk populations – the impact of this phenomenon must now be explored. Implicit in the discussion so far has been the assumption that treatment is less effective for those who do not fully engage with it – marking premature termination as a problem to be addressed, not just a phenomenon to be observed. This assumption is largely borne out in research. Some of this research is noted above, in the discussion of the dose-effect literature. For instance, Hansen and colleagues (2002) cited a consensus that 50% of patients will improve within 13 to 18 sessions of therapy, but noted that in a naturalistic sample, clients tended to receive only five sessions and demonstrated a correspondingly lower improvement rate of approximately 20%.

Other studies compare treatment completers and non-completers on various outcome measures to provide a more detailed analysis of the effects of premature termination. In a five-year follow-up study for substance abuse treatment in Norway, Ravndal and Vaglum (1998) found that 36% of adults who completed treatment reported either no use or light use in the year prior to follow-up, compared with 17% of those who did not complete treatment. Additionally, completers scored significantly higher on a measure of social functioning in the year prior to follow-up than did members of the non-completion group. In another substance abuse study, this one from South Africa, adults who completed the full duration of their agreed-upon treatment program were more likely to be abstinent upon exit from treatment (Myers et al., 2018).

A study of eight different treatment programs in Norway examined outcomes for clients with personality disorders who either dropped out or completed treatment (Karterud et al., 2003). On average, completers improved significantly on all outcome variables, and this improvement was maintained or increased at one-year follow-up. In contrast, dropouts did not report overall

gain from the treatment, and changes in their assessment scores were not significant. Additionally, treatment dropouts reported significantly higher rates of hospitalization at one-year follow-up than did treatment completers (22% and 11%, respectively) (Karterud et al., 2003). In a quasi-experimental longitudinal study of families previously enrolled in Parent—Child Interaction Therapy, researchers compared 23 families who completed treatment with 23 families who dropped out prior to treatment completion (Boggs et al., 2005). Follow-up took place between 10 and 30 months after the initial assessment, and results indicated significantly better outcomes on measures of parenting stress and child's disruptive behavior for those who completed treatment.

In a study of recidivism rates among offenders who received cognitive-behavioral therapy, McMurran and Theodosi (2007) took a somewhat different approach to outcome analysis. Rather than comparing treatment completers with non-completers, they compared non-completers with those who received no treatment at all – investigating the possibility that treatment noncompletion increases the risk of recidivism over no treatment at all. The authors speculated that offenders removed from treatment might demonstrate an increase in anti-authority and antisocial attitudes, or that those who left before treatment was completed ran the risk of raising difficult issues without acquiring the skills to cope with or resolve them. Results provided some support for this hypothesis, with a mean effect size of d = - 0.16, but the study was limited by poor risk comparability between the 17 samples included in the analyses (McMurran & Theodosi, 2007). Although the notion that baseline risk may be increased by treatment noncompletion requires further investigation, this study brings to the fore the complex relationship between risk factors, treatment participation, and treatment completion.

In considering the potential impact of premature termination on long-term outcomes, it is essential to remember the limitations of this research. Treatment dropout has been reliably demonstrated to correlate with poorer outcomes, but these studies are necessarily naturalistic. Causality cannot be inferred. The section below discusses the attempts of some studies to control for variables that may explain the presumed relationship between treatment completion and outcomes. Nevertheless, results should be interpreted with caution.

Reasons for Premature Termination

The assumption that premature termination of therapy contributes to adverse outcomes is complicated by the possibility that a more difficult trajectory may itself be a contributing factor in a client's decision to withdraw from treatment. For instance, Kazdin and colleagues (1994) hypothesized that children who dropped out of therapy would show greater impairment at the end of treatment than children who completed, but that these differences would be accounted for by subject selection variables and severity of dysfunction prior to treatment – not by the termination itself. Results supported these hypotheses, though effect sizes were regrettably not reported for primary analyses. Dropouts did demonstrate greater impairment than completers at the end of treatment, but outcome differences were no longer statistically significant when pretreatment severity of dysfunction was controlled (Kazdin et al., 1994). Nevertheless, the researchers noted that among dropouts and matched completers (the group for which subject factors were controlled), completers demonstrated a greater breadth and magnitude of improvement. A tentative correlation was also observed within the dropout group between number of completed sessions and improvement in child aggression symptoms ($r = .43$, $p < .05$, but the correlation was not significant after a Bonferroni correction). Kazdin and colleagues (1994) concluded that pretreatment factors such as symptom severity do appear to influence both

likelihood of dropout and responsiveness to treatment, but there remains a possibility that even youth with severe symptoms derive some benefit from remaining engaged in treatment.

This perspective has some relevance for the studies described above, which offer both supporting and contradictory evidence for the influence of pretreatment factors on treatment completion. In the Ravndal and Vaglum (1998) study, program completion was significantly correlated with infrequent use of alcohol before the start of treatment (gamma = -0.30) – but also with more frequent use of amphetamines (gamma = 0.27). In a similar vein, participants in the study by Myers and colleagues (2018) were more likely to complete treatment if they demonstrated more severe drug problems, defined as daily drug use (compared with monthly use; adjusted Odds Ratio = 3.44) and problems with heroin (compared with no heroin use; adjusted Odds Ratio = 4.62). However, within the treatment programs evaluated by Karterud and colleagues (2003), premature termination was significantly predicted by previous or current substance abuse and having a high number of personality disorder criteria (effect sizes not reported). In contrast, in the Boggs and colleagues (2005) study, completer and dropout groups were found not to significantly differ on any pretreatment variables, including severity of symptoms and presence of comorbid disorders. These mixed findings suggest that while pretreatment severity is often significant, it is not the sole determinant of treatment completion or outcome.

Of particular interest to the present study is the role of family functioning as a pretreatment factor which may impact the course of therapy for youth in treatment. Although more frequently measured as an outcome variable, family functioning has been included in some studies as a potential predictor of treatment completion and effectiveness. In a study of children and adolescents placed in residential treatment programs, Sunseri (2004) defined program

completion as mutually agreed upon termination after the full or partial attainment of treatment goals. He found that family functioning (based on a measure assessing variables such as problem solving, parenting skills, and family conflict) significantly predicted treatment completion as well as behavioral improvements at discharge, though effect sizes were regrettably not reported. Kazdin and colleagues (1993) found that adverse family child-rearing practices (e.g., poor monitoring, harsh punishment) was significantly associated with premature termination from treatment in an outpatient sample of children ages 5 to 13 years, such that families with high levels of adverse child-rearing behaviors were 1.79 times more likely to prematurely terminate treatment. Assessments of family functioning within treatment sessions have also been found to distinguish treatment completers from non-completers. For instance, Alexander and colleagues (1976) reported that families who prematurely terminated from Functional Family Therapy (of particular relevance to the current study) demonstrated a higher ratio of defensive statements to supportive statements compared to those who completed treatment (effect sizes not reported). Shields and colleagues (1991), analyzing initial interviews within structural-strategic family therapy, found that family disagreement during the first session significantly predicted likelihood of completing therapy; families with higher levels of disagreement were less likely to successfully complete ($\beta = -0.20$). A few other studies indicated the potential impact of family functioning on engagement with the process of treatment. Looking at a sample of adults enrolled in drug treatment, Costantini and colleagues (1992) found that a measure of family cohesion predicted patients' experience of dysfunction three months into treatment, with significant correlations ranging from -0.44 to -0.61. Whittaker and Robitschek (2001) noted that family functioning significantly predicted personal growth initiative in a sample of college students; statistically significant standardized beta values ranged

from 0.19 to 0.35. These findings lend additional weight to the notion that treatment progress and outcomes should be considered in the context of pretreatment factors.

A multitude of other factors have been identified as predictors of premature termination. These influences, or points of engagement with therapy, can be conceptualized within six broad categories: client characteristics, barriers to treatment, environmental factors, need factors, perspectives on mental health, and beliefs about the treatment of mental illness (Barrett et al., 2008). Barrett and colleagues (2008) noted that findings on client characteristics in premature termination research have historically been inconsistent. However, several demographic factors have been associated fairly consistently with greater risk for treatment dropout. Ethnic or racial minority status, younger age, and lower income or socioeconomic status all appear to increase the likelihood that clients will prematurely withdraw, with reported correlations ranging from 0.23 to 0.43 (Arnow et al., 2007; Bischoff & Sprenkle, 1993; Campbell et al., 2000; Cooper & Conklin, 2015; Kazdin et al.,1993). Nevertheless, there are studies that report no significant differences on these variables between treatment completers and non-completers (Kaminer et al., 1992; McPherson et al., 2012). Barriers to treatment involve logistical obstacles to connecting with, enrolling in, and physically attending psychotherapy services. Those who rely on others for transportation or childcare services, for instance, may be limited in their ability to participate in therapy (Campbell et al., 2000; Wells et al., 2011). Environmental factors may refer to issues pertaining to immediate surroundings, such as the behavior of staff members in the treatment clinic, or the broader social space, such as access to mental health insurance (Barrett et al., 2008; Olfson et al., 2009). Need factors, as conceptualized by Barrett and colleagues (2008), reflect the concept of initial treatment severity and distress discussed above. The researchers also noted how perspectives on mental health, often stemming from socialization to different cultural

norms, might influence the likelihood of a given individual to seek out or engage with treatment. Finally, client beliefs about the treatment of mental illness frequently impact the course of therapy. For instance, one study demonstrated that client expectations for the length of treatment significantly predicted their attendance behavior, with correlations ranging from 0.38 to 0.43 (Beck et al., 1987). Multiple studies have indicated that perceptions of and interactions with the therapist have a strong impact on treatment satisfaction and completion (e.g., Barrett et al., 2008; Bischoff & Sprenkle, 1993; Reis & Brown, 1999; Robbins et al., 2006).

Relationships within Treatment

Reflective of this last factor, the therapeutic alliance is consistently identified as a key element in successful completion of psychotherapy (Naidu & Behari, 2010). This assertion is grounded in the belief that relationships have the potential both to significantly contribute to existing problems and to act as the avenue for effecting meaningful change (Johnson & Wright, 2002). Treatments involving multiple clients (for example, family therapy) have both the benefit and challenge of involving more relationships and accompanying variables.

As expected, the theoretical importance given to the multiple alliances present in family therapy is supported by research results. Robbins and colleagues (2006) demonstrated that both mothers and adolescents in families who dropped out of multidimensional family therapy exhibited significantly lower alliance scores with the therapist than families who completed treatment. Hawley and Weisz (2005) found evidence that parent—therapist and youth—therapist alliances may be related to distinct outcomes; in their study, the alliance between parent and therapist was significantly related to the course of treatment (e.g., frequency of participation, mutual termination decisions), while the alliance between youth and therapist was significantly related to symptom improvement. Another study of multidimensional family therapy

emphasized the interactive potential of these alliances. Observer ratings of adolescent—therapist alliance predicted adolescent substance abuse and symptoms at post-treatment, but this association was moderated by the strength of the parent—therapist alliance (Shelef et al., 2005). The evidence that multiple therapeutic relationships (and the interactions between them) can impact the course and outcome of treatment raises additional questions. One wonders, for instance, how the course of therapy might be impacted if the therapeutic experiences of multiple clients were found to radically differ, or if the relationship between these clients was viewed as an alliance in its own right.

Parent—Child Agreement

Within family therapy, the parent—child relationship is a common target for therapeutic intervention; it is less frequently considered as an explicit variable impacting treatment completion. However, reported experiences of treatment and perceptions of related factors often vary between parent and child. For instance, Hawley and Garland (2008) found that individual reports of working alliance according to adolescents, parents, and therapists were relatively stable over the course of treatment, but consistency among these reporters within the same therapy setting was low. In another study, individual parent and adolescent therapeutic alliances did not predict premature termination, but *imbalance* in these alliances did – families that terminated prematurely were more likely to have a parent—therapist alliance rated as significantly stronger than the adolescent—therapist alliance (Robbins et al., 2003). Of particular interest to the current study, this finding occurred in a sample of participants receiving Functional Family Therapy; the authors highlighted the implication that relationships within the family therapy setting may be most helpfully viewed systemically rather than individually. The

lack of cohesion in the parent and child experience of the therapeutic alliance demonstrated in these studies can easily be extended to other aspects of therapy, as well.

Beyond perceptions of the treatment environment, research has also demonstrated that parents and children often differ in their reports of symptoms or behaviors. Cremeens and colleagues (2006) found significant differences in child self-report and parent proxy report for a quality-of-life measure. Another study, notable for the 51% of its sample which came from a lower socioeconomic status (i.e., unemployed, receiving welfare, or working low-paying jobs), indicated inconsistent reporting of psychiatric symptoms (especially symptoms that were subjective or less easily observed) between mothers and children (Herjanic & Reich, 1982). Salbach-Andrae and colleagues (2009), examining the Achenbach Scales, found poor-to-low agreement between parent- and adolescent-reported problem behavior on the internalizing scale and total problem scale, and moderate agreement on the externalizing scale. In another study, agreement between parent and child reporting of child behaviors was predicted by the salience of the question to the individual reporting and observability/willingness to report the behavior (Karver, 2006). In an examination of reports of parent behaviors, Tein and colleagues (1994) found a low degree of agreement between parents and children. Another study indicated that adolescents reported many more problems about themselves than their parents did about them; discrepancies were larger for externalizing than internalizing problems, larger for girls than boys, and increased with age (Verhulst & Ende, 1992).

Differences in parent and child perceptions are especially salient when they pertain to the reason for coming to treatment, or their conceptualization of the problems to be addressed. The studies reported above examined particular measures which might be used to inform treatment planning. Looking at this issue more specifically, a study of 381 outpatient, clinic-referred

children and their parents found that 63% failed to agree on a single specific problem, and more than a third failed to agree on a broad problem area (Yeh & Weisz, 2001). These data were collected at the beginning of treatment, raising questions about how varying parent and child conceptualizations of the presenting problem might inform the planning and course of treatment. In a meta-analysis of cross-informant studies, De Los Reyes and colleagues (2015) noted that clinical decisions typically corresponded with parent reports to a greater extent than child self-reports. Another study indicated that discrepancies between mother and child perceptions of child behavior problems were in fact related to conflict between mother and child (De Los Reyes & Kazdin, 2006). In therapeutic settings where the parent—child relationship is itself the presenting problem (or one of the foci of treatment), these questions gain added nuance.

Functional Family Therapy

Functional Family Therapy (FFT) is a family-based treatment program designed for use with at-risk and court-involved youth between the ages of 11 and 18 (Sexton & Alexander, 2004). Originally developed in 1969, it is now recognized as an empirically supported treatment model which reduces recidivism and criminal offense rates significantly more effectively than other programs (Celinska et al., 2018; Sexton & Alexander, 2000). It is included as an effective treatment in the Office of Juvenile Justice and Delinquency Prevention Model Programs Guide (Model Programs Guide | OJJDP, n.d.). Central to the FFT philosophy is the importance of understanding the psychosocial systems in which behaviors occur – particularly the family dynamic. Family interactions and relationships are viewed as the primary means of effecting change in an adolescent's life, and many of the techniques included in FFT are designed to address potential shortfalls in family functioning (Alexander & Robbins, 2011). Adolescents and

parents (or other caregivers and family members) participate jointly in the course of therapy, which consists of three phases.

Each of the FFT phases is characterized by specific goals (Sexton & Alexander, 2004). The first phase is centered around engagement and motivation; the goal of the therapist is to develop alliances with the family members, improve communication, develop a focus for treatment, and minimize the likelihood of dropout. Assessment during this phase focuses on the presenting problem, risk and protective factors, and the context within which the family operates (Sexton & Alexander, 2000). Alexander and Robbins (2011) noted that the first phase "is less characterized by a formal set of therapeutic techniques than it is of an attitude on the part of FFT therapists… during the initiation of the process of intervention" (p. 249) and typically lasts for three sessions. The second phase hinges on behavior change, with the goal of developing individualized change plans for the family and building relational skills between family members. Therapists are trained to employ a number of techniques in pursuit of this goal, including "change focus" strategies, designed to address negative or unproductive communication patterns within a given session, and "change meaning" strategies, which invite family members to reframe their conceptualization of themselves and each other (Alexander & Robbins, 2011). This phase additionally includes the development of both general skills (e.g., communication, parenting techniques, conflict management, and problem solving) and skills specific to individual family challenges. The third and final phase of FFT is geared toward generalization. The goal in this phase is to maintain the behavioral changes that have been achieved and to extend these changes to all relevant areas of life. Part of this process may involve identifying supportive resources or relationships within the community (Sexton & Alexander, 2000). Although adherence to the treatment model has a significant impact on

effectiveness, particularly with high-risk youth (Sexton & Turner, 2010), number of sessions may vary based on the individual needs of each family. In a summary of the "ideal FFT intervention," Alexander and Robbins (2011) referred to the second and third phases as "middle sessions" and "later sessions" respectively, with no mention of session number, in contrast to the three sessions described for the first phase. Typically, FFT treatment takes between 8 and 16 sessions (Kretschmar et al., 2018).

It is worth noting that, although FFT is widely considered to be an effective treatment, the studies which demonstrate this effectiveness are not without their limitations. For instance, although some recent research has drawn more strongly from ethnic minority populations (e.g., Darnell & Schuler, 2015; Dunham, 2009; Flicker et al., 2008; Kretschmar et al., 2018), many studies – particularly early in the evaluation process – involved predominantly white samples (Baglivio et al., 2014). Additionally, a handful of studies have failed to show support for the effectiveness of FFT in comparison to management as usual (e.g., Humayun et al., 2017). Moreover, studies whose results do support FFT frequently exclude youth with a dense constellation of risk factors – for example, youth who were more deeply involved in the court system or whose criminal charges were judged to be more serious (e.g., Darnell & Schuler, 2015; Celinska et al., 2013; Gottfredson et al., 2018). These collective limitations of the existing literature highlight the importance of conducting studies which include diverse samples of youth.

The FFT literature would also benefit from an expanded exploration of retention and completion rates. Although treatment dropouts are reported in some studies, others note the lack of data on dropout cases as a limitation (Celinska et al., 2018). In an assessment of adolescents in FFT treatment for drug use or related behavior problems, Robbins and colleagues (2003) found that 41.2% of participants prematurely terminated (defined as failure to complete at least

eight sessions and supported by therapist judgment). Celinska (2015) compared a sample of families who were mandated to FFT by the court system with a sample of families who were referred by other agencies. Her results demonstrated a dropout rate of 20% for the non-mandated families and 19% for the mandated families, with no significant difference in improvements between the groups.

Given FFT's explicit focus on treating at-risk youth within the context of the family system, it presents itself as a good candidate for investigating the impact of parent—child relationship agreement on treatment completion and outcome.

Current Study

The purpose of the current study was to investigate the impact of family functioning on treatment completion and outcomes for court-involved youth engaged in FFT. Specifically, the study investigated whether initial reports of family functioning (according to either youth or parent) predicted the course of treatment. Additionally, the study analyzed whether agreement between parent and child in reports on their dyadic relationship predicted the course of treatment. That is, if parent and child had similar views of their relationship (e.g., both agree that the child tells the parent important details about their life), was that parent—child dyad more likely to complete therapy than one in which the parent and child had more differing views? Additionally, was completion of treatment associated with more positive outcomes, operationalized within the setting of the juvenile court as lower rates of recidivism?

The hypotheses were: (1) (a) Parent—child dyads with higher levels of family functioning will be more likely to complete treatment than those with lower functioning, (b) Parent report of family functioning will be more predictive of treatment completion than child report of family functioning, (2) Parent—child dyads with higher levels of agreement in

perceptions of their relationship will be more likely to complete treatment than parent—child dyads with lower levels of agreement, and (3) Treatment completion will be associated with lower rates of recidivism at follow-up.

METHODS

The present study utilized data collected during a program evaluation conducted by Bowling Green State University (BGSU) in partnership with the Lucas County Juvenile Court (LCJC) system. The work was funded by a Second Chance Act (SCA) grant, awarded to the Criminal Justice Coordinating Council (a unit of government in Lucas County) by the Office of Juvenile Justice and Delinquency Prevention. Grant funds supported the implementation of services provided to very high-risk court-involved youth, including Functional Family Therapy (FFT), which received nearly two-thirds of the allotted funds. The grant was received in the fall of 2014. After a period of planning and preparation (which included training therapists in FFT), youth and their families were referred to grant-funded services beginning in late 2015. A total of nine therapists were involved in providing FFT within the homes of participating families. The program evaluation was intended to evaluate the impact of grant-funded services, with a focus on recidivism rates among participants.

Participants

A total of 42 families were identified who completed at least one measure (i.e., parent or child report) of family functioning and for whom FFT completion data were available. Of these families, 38 consisted of a dyad in which both parent and child completed the family functioning measure. Adolescents within this sample ranged in age from 14 to 18 years old and were racially representative of juvenile court-involved populations within the United States (Unbalanced Youth Justice, W. Haywood Burns Institute, 2015).

Measures

Measures reported in the current study included the Parent—Child Relationship and Monitoring Questionnaires (Stattin & Kerr, 2000) along with demographic and administrative

data. Scores on the Parent—Child Relationship and Monitoring Questionnaires were used as indicators of family functioning.

Parent—Child Relationship Questionnaire

The Parent—Child Relationship Questionnaire includes eight questions which assess how the parent and child view their relationship (Stattin & Kerr, 2000). These questions are identical for parent and child, with the exception of slight wording differences as necessary for clarity (e.g., parents were asked to consider their relationship with their child, youth were asked to consider their relationship with their parent). Example questions include, "Does your parent [child] usually support and encourage you?" and "Do you and your parent [child] argue and fight with each other?" (reverse scored). Responses follow a Likert scale ranging from 0 (Almost Never) to 4 (Almost Always); higher scores signify a more positive relationship. Total score is calculated by mean. In the original study, Stattin and Kerr (2000) administered this questionnaire only to children, not to parents; they found high internal reliability for child-reported responses ($\alpha = .89$). The current study found high internal reliability for both child report ($\alpha = .88$) and parent report ($\alpha = .81$).

Parent—Child Monitoring Questionnaire

The Parent—Child Monitoring Questionnaire assesses parent and child perspectives on parental awareness of child activities (Stattin & Kerr, 2000). It follows the Parent—Child Relationship Questionnaire (Stattin & Kerr, 2000) format of nearly identical questions for parent and child, with one exception; the child questionnaire contains one item ("During the past month, have your parents ever had no idea of where you were at night?") with no corresponding parent question. In total, there are 23 parent questions and 24 child questions. Other example items include, "Do you know where your child goes when they are out with friends at night? [Does

your parent know where you go when you are out with friends at night?]" and "Do you feel your child keeps a lot of secrets from you about what they do during their free time? [Do you keep a lot of secrets from your parent about what you do during your free time?]" (reverse scored). Likert scale responses range from 0 (Almost Never) to 4 (Almost Always). Higher scores signify higher perceptions of parental monitoring and child disclosure. Total score is calculated by mean; Stattin and Kerr (2000) found high internal reliability for both child-report ($\alpha = .86$) and parent-report ($\alpha = .89$) on this measure. The current study found acceptable internal reliability as well, for both child report ($\alpha = .74$) and parent report ($\alpha = .87$).

Demographic Information

Information pertaining to the age, race, and zip code of each adolescent was retrieved from records located at the Lucas County Juvenile Court office. Socioeconomic status was operationalized as the percent of tax returns within a given zip code whose adjusted gross income fell within the lowest income bracket (between $1 and $25,000). This information was drawn from the records of the United States Internal Revenue Service; data utilized were from 2015, the year in which most other initial study variables were collected (IRS, 2020).

FFT Completion Data

The behavioral health agency delivering FFT kept records of which families enrolled in treatment, how far they progressed through the treatment phases, how many hours of service they received, and whether they successfully completed the full course of treatment. In the present study, treatment completion was operationalized in two ways: the latest phase of FFT completed before withdrawal (Phase 1, 2, or 3, or no engagement) and the number of hours of FFT services received. As each phase of FFT is associated with specific goals, the first operationalization provided some indication of goal attainment within treatment. The second operationalization

provided an indication of "dose" of treatment (i.e., duration of exposure irrespective of goal attainment). These varied operationalizations are reflective of the multiple definitions found in the existing literature and offered different angles of insight into the nature of treatment completion.

Recidivism Data

Recidivism rates were determined based on arrest records from the Lucas County Juvenile Court system and (for those youth who turned 18 over the course of the evaluation) records from the Northwest Ohio Regional Information System (NORIS). Information was available for the one-year period following involvement in court services and was broken down by severity of offense (e.g., felony or misdemeanor), such that recidivism was measured as 0=no recidivism, 1=recidivism at the same or lower level of severity as the initial offense, and 2=recidivism at a higher level than the initial offense.

Procedure

Families were recruited prior to adolescents' release from a residential treatment facility. A parent or primary guardian provided consent for clinical psychology graduate students to separately interview them and their child. They also consented for the research team to access the adolescent's demographic information and arrest data from the court system. This consent was obtained by a member of the research team or by a director of court programming. Once the parent or guardian had consented, a BGSU graduate student approached the adolescent to obtain their assent for participation in the study.

The graduate student conducted the parent and child interviews separately, in no particular order (i.e., once consent and assent were obtained, either parent or child might be interviewed first, depending on availability). Interviews were conducted in semi-private areas,

where conversations would not be overheard. The instructions and first item of each measure were read aloud; if there was a concern about a participant's reading ability, the graduate student read out additional items as well. Families were thanked for their completion of the survey and were provided with a $10 gift card to a fast-food restaurant. This marked the end of families' direct engagement with the research team; subsequent data were obtained from court records and the administrative files of the agency providing FFT.

RESULTS

Overview of Analyses

Preliminary Analyses

Descriptive analyses were conducted to describe the demographic characteristics of the adolescents and parents within the study sample. Correlations were also computed between study variables of interest (age, neighborhood socioeconomic status, recidivism, measures of treatment completion, and family functioning). Paired-samples t-tests were used to determine if mean child and parent reports of family functioning significantly differed. Racial differences were not explored, as the sample makeup precluded meaningful analysis (see below).

Primary Analyses

Hypothesis 1a. Hypothesis 1a was tested by correlating indicators of family functioning (i.e., relationship and monitoring) with each of the operationalizations of treatment completion: phase of treatment and hours of service. Correlations involving phase of treatment (an ordinal variable) utilized Spearman's Rho. Correlations involving only continuous variables (i.e., family functioning variables, hours of services) utilized Pearson correlations. In cases where both parent-report and child-report data were available, analyses were run where the higher of the two was chosen as the indicator of family functioning. This was done to increase sample size (i.e., allowing the inclusion of participants for whom only one report of family functioning was available) and was not done in any other analyses (e.g., those comparing parent and child report). Fisher's z was used to test whether family functioning was more strongly correlated with one of the two different types of treatment completion.

Hypothesis 1b. Hypothesis 1b was tested using regression analyses. Ordinal regression was used when treatment completion was operationalized as phase of completion; linear

regression was used when treatment completion was operationalized as hours of service. Significant changes in variance explained with the addition of each variable (child report and parent report of family functioning) were examined to determine the predictive power of each informant with regard to treatment completion. Individual models were run for each indicator of family functioning (i.e., relationship and monitoring).

Hypothesis 2. Hypothesis 2 was tested using polynomial regression analyses. As demonstrated by Laird and De Los Reyes (2013), such analyses allow more accurate and comprehensive testing of discrepancy hypotheses than analyses which rely on difference scores. Specifically, the apparent effects of difference scores on an outcome variable may often be attributed to unequal variances between informant scores or to unequal correlations between informants and the outcome (Laird & De Los Reyes, 2013). Informant discrepancies may more comprehensively be examined through interaction terms in polynomial regression, with significant interaction terms probed to determine which combinations of informant scores are associated with a given outcome. Following this method, parent—child agreement was assessed by examining interactions between parent and child report; agreement was defined as when both parent and child reported either high or low levels of the construct in question. (Variables were mean centered prior to the calculation of interaction terms.) Significant interactions were interpreted with the child report serving as the moderator for parent report, consistent with previous findings that the parent perspective is often prioritized in the treatment setting (De Los Reyes et al., 2015) as well as current findings on the higher predictive power of the parent report with regard to treatment completion (see below).

In the present study, polynomial regression analysis was used to test the interactive effect of parent and child report of family functioning on treatment completion. Linear regression was

used when treatment completion was operationalized as hours of service. The model is represented by the following equation:

$$Y = b_0 + b_1C + b_2P + b_3C^2 + b_4CP + b_5P^2 + b_6CP^2 + b_7PC^2 + b_8C^3 + b_9P^3 + e$$

Ordinal regression was used when treatment completion was operationalized as phase of treatment at termination. The ordinal regression model is represented by the following equation:

$$logit(Phase) = ln(prob.(Phase)/(1 - prob.(Phase)) = b_0 - (b_1C + b_2P + b_3C^2 + b_4CP + b_5P^2 + b_6CP^2 + b_7PC^2 + b_8C^3 + b_9P^3)$$

C and *P* represent the child and parent reports of family functioning (respectively), while *CP* represents the interaction between child and parent reports. The inclusion of higher order terms (enumerated below) is consistent with recent research on informant discrepancy (Laird & De Los Reyes, 2013; Leung et al., 2016). Belzak and Bauer (2019) noted that significant interaction terms may actually be indicative of quadratic effects, particularly when the predictor variables are correlated. In the current study, parents and children reported on the same constructs from different perspectives; it was therefore reasonable to assume that their reports may have been correlated with each other. Thus, a model including only *C*, *P*, and *CP* as predictors, which indicated a significant effect for *CP*, might actually have been reflective of a significant quadratic effect for *C* or *P*. Quadratic terms (C^2 and P^2) were included in the equation to control for this possibility. It was reasonable to assume that the relationship between family functioning and treatment completion may be nonlinear. Prior studies investigating parent and child reports of similar constructs have found significant interactions which included quadratic terms; researchers suggested that "the predictive utility of informant discrepancies is most pronounced at the extremes" (Laird & De Los Reyes, 2013, p. 12). In recognition of this, interactions involving quadratic terms (CP^2 and PC^2) were added to the model. As with the lower order

interaction terms, the likelihood of correlation between parent and child report necessitated a cautious approach to interpreting significant quadratic interactions. For instance, if the association between parent report of family functioning and treatment completion was cubic in nature, and parent report was correlated with child report, then a significant interaction term CP^2 might reflect this cubic relationship, rather than a true interaction. Cubic terms (P^3 and C^3) were therefore added to the model to control for this possibility. Additional higher order terms were not included, to avoid further complicating the model and to remain consistent with the conventions of prior research on informant discrepancy (Laird & De Los Reyes, 2013; Leung et al., 2016).

Regression models with overall statistical significance were subsequently examined for significant interaction terms. Significant interactions were interpreted through plotting of simple slopes at high (+1*SD*), mean, and low (-1*SD*) levels of the moderator. It should be noted, however, that the sample size of the current study did not provide the power to adequately test the models described above; findings are therefore interpreted with caution.

Hypothesis 3. Hypothesis 3 was tested by correlating level of recidivism (as described in the Measures section) with both operationalizations of treatment completion: phase of treatment at discharge and hours of service. Spearman's Rho was utilized, as all correlations involved level of recidivism (an ordinal variable). Fisher's z was used to test whether recidivism was more strongly correlated with one of the two different types of treatment completion.

Results of Preliminary Analyses

Missing and Skewed Data

The data for this study were drawn from multiple sources, which resulted in several instances of missing data. The total sample consisted of 42 participants with at least one report

(parent or child) of family functioning and at least one measure (service hours or phase) of FFT completion. Within this sample, some participants were missing either child report (n = 1) or parent report (n = 5) of family functioning, FFT service hours (n = 3), recidivism data (n = 5), or zip code (used to estimate neighborhood SES; n = 6). Because these data were missing at the participant level (i.e., not at the item level within a measure), missing data were treated as missing rather than being imputed. (The sample sizes included in each analysis are noted below.) Outcome variables were checked for skewness and were found to be within acceptable limits (i.e., between -0.5 and 0.5).

Descriptive Statistics

The demographics of the study sample are presented in Table 1. The majority of the sample (76.2%) was Black/African American. Remaining racial groups were relatively evenly split between Caucasian (9.5%), Hispanic (7.1%), and Multiracial (7.1%). The sample was predominantly male (90.5%). Participants ranged in age from 14 to 18 years old, with a mean age of 16.1 years. Correlations, means, standard deviations, and ranges for study variables of interest are presented in Table 2 and discussed in more detail below.

Table 1

Sample Demographics

Variable	**Frequency (N)**	**Percent (%)**
Race		
Black/African American	32	76.2
Caucasian	4	9.5
Hispanic	3	7.1
Multiracial	3	7.1
Gender		
Male	38	90.5
Female	4	9.5
	Min, Max	**Mean (SD)**
Age	14, 18	16.10 (1.21)

Table 2

Bivariate Correlations between Study Variables

r or r_s (N included in correlation)

	1	2	3‡	4	5‡	6	7	8	9	Mean (SD) Min, Max
1. Age	1.00									16.10 (1.21) 14, 18
2. % in Zip Code in Lowest Income Bracket	-.22 (36)	1.00								.53 (.10) .29, .64
3. Recidivism‡	-.07 (37)	.07 (36)	1.00							.54 (.51) .00, 1.00
4. FFT Hours	-.33* (39)	.13 (34)	-.30 (35)	1.00						10.33 (8.87) .00, 28.25
5. FFT Phase‡	-.21 (42)	-.18 (36)	-.37* (37)	.55** (39)	1.00					1.62 (.96) .00, 3.00
6. Relationship (Child)	-.25 (41)	-.09 (35)	-.09 (36)	-.01 (38)	.28 (41)	1.00				2.93 (.80) .50, 4.00
7. Monitoring (Child)	-.20 (41)	-.33 (35)	-.04 (36)	.07 (38)	-.01 (41)	.34* (41)	1.00			2.20 (.72) .71, 4.21
8. Relationship (Parent)	-.19 (37)	.21 (31)	-.13 (32)	.46** (34)	.23 (37)	.19 (36)	-.16 (36)	1.00		2.22 (.67) .50, 3.50
9. Monitoring (Parent)	-.45** (37)	.03 (31)	-.11 (32)	.46** (34)	.25 (37)	.29 (36)	.19 (36)	.47** (37)	1.00	2.38 (.60) 1.30, 3.91

‡ indicates Spearman's Rho correlation (r_s)

* correlation is significant at $p < .05$

** correlation is significant at $p < .01$

Neighborhood Socioeconomic Status (SES). Participants in the sample were from a metropolitan area in the Midwestern United States. Neighborhood data were available for 36 participants, who resided in 15 different zip codes. Analysis of tax return data from these zip codes indicated a relatively high concentration of poverty. Across zip codes, the mean percentage of tax returns whose adjusted gross income fell within the lowest income bracket (between $1 and $25,000) was 53.3%. Percentage of tax returns in a given zip code which fell in the lowest income bracket was not significantly correlated with any variables of interest, although the correlation with adolescent report of parental monitoring approached significance.

Recidivism. Recidivism data was available for 37 participants in the year following involvement with court services. Of these participants, 45.9% did not recidivate and 54.1% reoffended at the same or lower level of severity as their original offense. No participants recidivated with an offense more severe than their original offense (i.e., no participants who became involved with the court due to a misdemeanor subsequently were convicted of a felony). Recidivism was not significantly correlated with demographic variables of interest. Association between recidivism and treatment completion is addressed in Primary Analyses.

Treatment Completion. Treatment completion data was available for 39 participants with regard to number of service hours received and 42 participants with regard to phase of FFT at discharge. The mean number of service hours received was 10.33 (SD = 8.87). Fifty percent of participants in the sample terminated in the first phase of treatment, with 7.1% terminating prior to engaging in services, 16.7% terminating in phase two, and 26.2% terminating in phase three. Number of service hours received was significantly correlated with participant age, such that older participants tended to receive fewer services hours. Number of service hours was also significantly positively correlated with both parental indicators of family functioning (i.e.,

relationship quality and monitoring). Higher levels of family functioning according to parent report were associated with higher service hours. As might be expected, number of service hours was significantly positively correlated with treatment phase at discharge. Treatment phase at discharge was not significantly correlated with any demographic variables or family functioning variables.

Family Functioning. A paired-samples t-test found a significant difference between parent and child report of relationship quality ($t = 4.88$, $p < .001$). Parent report of relationship quality ($M = 2.22$) was lower on average than child report ($M = 2.97$). Differences were not significant for parent and child report of monitoring. Parent-report indicators of family functioning were not significantly correlated with child-report indicators of family functioning. However, family functioning variables were significantly correlated within informant categories (see Table 2). For child-report measures, relationship quality was positively correlated with monitoring. This association was even stronger for parent report of relationship quality and monitoring. A significant negative correlation was found between participant age and parent report of monitoring. Parents tended to report lower levels of monitoring for older adolescents.

Results of Primary Analyses

Hypothesis 1a

Pearson's correlations were used to test the relationship between number of FFT service hours and family functioning, using the higher of the two scores when both parent-report and child-report data were available. Number of service hours was not significantly correlated with any indicators of family functioning (i.e., relationship quality or monitoring); the hypothesis is therefore not supported for this operationalization of treatment completion. Spearman's Rho was used to test the relationship between phase of FFT at discharge and family functioning. Phase of

FFT at discharge was found to be significantly correlated with mean total scores on relationship quality (r = .37, p = .02) but not with monitoring. Thus, the hypothesis is partially supported for this operationalization of treatment completion. Higher scores on the measure of relationship quality at intake were associated with terminating FFT at a later phase of treatment. (See Table 3 for a summary of Hypothesis 1a correlation results; relevant correlations are those involving treatment completion and family functioning variables.) Fisher's z test was used to test whether family functioning was more strongly correlated with one of the two different types of treatment completion (Weiss, 2011). These tests indicated no significant difference in the strength of correlation between family functioning and either measure of treatment completion (Relationship Quality z test statistic = .99, p = .32; Monitoring z test statistic = .06, p = .96).

Table 3
Bivariate Correlations between Highest Report of Family Functioning and Treatment Completion (Hypothesis 1a)
r or r_s (N included in correlation)

	1	2	3	4‡
1. Relationship	1.00			
2. Monitoring	.34* (42)	1.00		
3. FFT Hours	.16 (39)	.23 (39)	1.00	
4. FFT Phase‡	.37* (42)	.22 (42)	.55** (39)	1.00

‡ indicates Spearman's Rho correlation (r_s)
* correlation is significant at $p < .05$
** correlation is significant at $p < .01$

Hypothesis 1b

Regression analyses were used to test whether parent or child report of family functioning was more predictive of treatment completion. With regard to number of service hours, treatment completion was significantly predicted by parent report of relationship quality and monitoring but not by child report (see Table 4). Thus, for number of service hours, the hypothesis that parent report of family functioning would be more predictive of treatment

completion than child report was supported. With regard to phase of completion, treatment completion was not significantly predicted by any measure of family functioning according to either parent report or child report (see Table 5). It is worth noting that, although neither informant significantly predicted phase of treatment completion, parent-report values trended closer to significance than child-report values. Thus, this hypothesis is partially supported for phase of treatment completion.

Table 4
Parent and Child Report as Predictors of FFT Hours at Termination (Hypothesis 1b) – Relationship Model

	R	**R^2**	**F (df)**	***p***
	.46	.21	4.02 (2, 30)	.03

	b	***SE***	***β***	***p***
Child Report	-.23	1.98	-.02	.91
Parent Report	6.11	2.17	.46	.01*

* indicates a statistically significant predictor

Table 5
Parent and Child Report as Predictors of FFT Hours at Termination (Hypothesis 1b) – Monitoring Model

	R	**R^2**	**F (df)**	***p***
	.46	.21	4.00 (2, 30)	.03

	b	***SE***	***β***	***p***
Child Report	.32	2.13	.03	.883
Parent Report	6.84	2.54	.45	.01*

* indicates a statistically significant predictor

Table 6

Parent and Child Report as Predictors of FFT Phase at Termination (Hypothesis 1b) – Relationship Model

Nagelkerke Pseudo R^2	**χ^2 (df)**	***p***
.11	3.67 (2)	.16

	β	***SE***	***p***
Child Report	.24	.43	.58
Parent Report	.84	.50	.09

Table 7

Parent and Child Report as Predictors of FFT Phase at Termination (Hypothesis 1b) – Monitoring Model

Nagelkerke Pseudo R^2	**χ^2 (df)**	***p***
.05	1.83 (2)	.40

	β	***SE***	***p***
Child Report	-.41	.46	.37
Parent Report	.59	.53	.27

Hypothesis 2

Polynomial regression analyses were used to test whether agreement between parent and child influenced likelihood of treatment completion. The results of curvilinear regression analyses (used to predict number of service hours) are reported in Table 6; results of ordinal regression analyses (used to predict the likelihood of terminating at a given phase) are reported in Table 7.

With regard to number of service hours, the full model for relationship quality (including child report, parent report, and all associated higher order terms and interactions) was statistically significant. The model indicated a statistically significant interaction between child-reported relationship quality and the quadratic effect of parent-reported relationship quality. The interaction was interpreted with child-reported relationship quality serving as the moderator for plotting the quadratic effect of parent-reported relationship quality using simple slope analysis (see Figure 1). However, it should be noted that the small sample size limits the conclusions that can be drawn from this analysis. This model was based on data from 33 families, meaning that the nine individual points of the simple slopes graph each represent only a handful of families. The following interpretation is therefore presented cautiously. As shown in Figure 1, the quadratic effect is positive for parent-reported relationship quality at low (and mean) levels of child-reported relationship quality but negative at high levels of child-reported relationship quality. Looking at the line for low child-reported relationship quality, parent agreement (i.e., low relationship quality) predicted completion of more service hours than parent disagreement at the mean, but did not predict completion of as many service hours as parent disagreement at high levels of relationship quality. Looking at the line for high child-reported relationship quality, parent agreement (i.e., high relationship quality) predicted completion of more service hours than

parent disagreement at low levels of relationship quality, but did not predict completion of as many service hours as parent disagreement at the mean. Thus, with regard to relationship quality and number of service hours, the hypothesis is partially supported. Agreement between parent and child did appear to have some influence on completion of service hours, though higher service hours were generally observed at higher reported levels of relationship quality regardless of agreement. Additionally, at high parent-report levels of relationship quality, discrepancies between child reports were less pronounced than they were at low parent-report levels, suggesting that agreement or disagreement at high parent-report levels may be less practically meaningful. The model which analyzed monitoring as a predictor of number of service hours did not include statistically significant interaction terms (see Table 6).

Figure 1

Predicted Number of Service Hours as a Function of Parent-Reported Relationship Quality at Low, Mean, and High Values of Child-Reported Relationship Quality

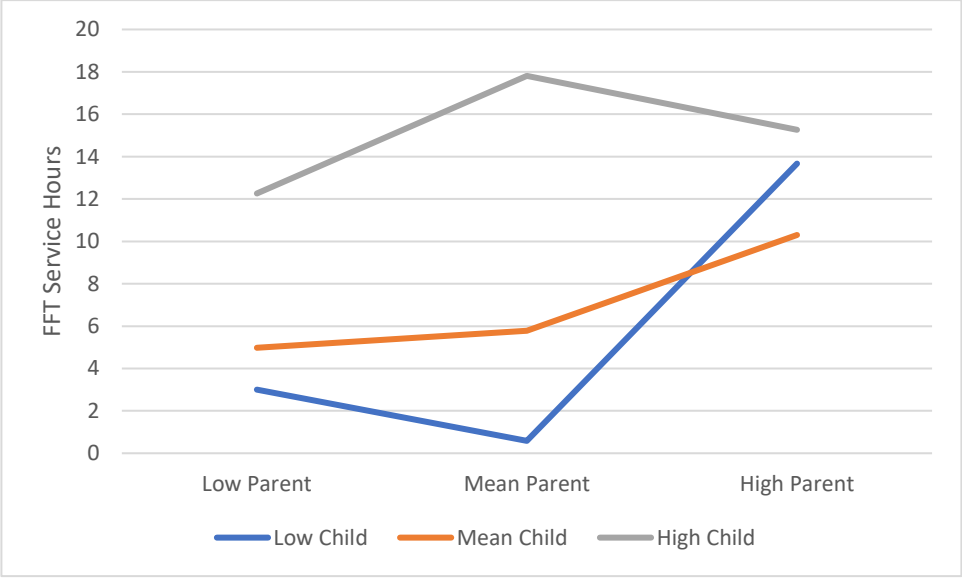

Table 8

Parent and Child Interactions as Predictors of FFT Service Hours at Termination (Hypothesis 2) – Relationship Model

	R	**R^2**	**F (df)**	***p***
	.75	.56	3.26 (9, 23)	.01

	b	***SE***	***β***	***p***
Child Report (C)	11.30	5.60	.94	.06
Parent Report (P)	-.59	5.08	-.05	.91
Child X Parent (CP)	-3.57	3.86	-.21	.36
Child Squared (C^2)	5.27	4.60	.64	.26
Parent Squared (P^2)	4.15	2.85	.30	.16
Child Squared X Parent (PC^2)	1.75	6.80	.13	.80
Parent Squared X Child (CP^2)	-16.45	6.44	-1.25	.02*
Child Cubed (C^3)	-.90	3.44	-.26	.80
Parent Cubed (P^3)	10.26	4.41	1.28	.03

* indicates a statistically significant interaction

Table 9

Parent and Child Interactions as Predictors of FFT Service Hours at Termination (Hypothesis 2) – Monitoring Model

	R	**R^2**	**F (df)**	***p***
	.66	.44	2.04 (2, 23)	.08

	b	***SE***	***β***	***p***
Child Report (C)	7.89	4.60	.62	.10
Parent Report (P)	5.28	6.05	.35	.39
Child X Parent (CP)	-6.14	7.54	-.25	.42
Child Squared (C^2)	2.32	3.05	.20	.46
Parent Squared (P^2)	-17.07	8.11	-1.02	.05
Child Squared X Parent (PC^2)	-10.11	8.64	-.39	.25
Parent Squared X Child (CP^2)	20.64	14.65	.85	.17
Child Cubed (C^3)	-5.60	2.29	-.99	.02
Parent Cubed (P^3)	4.90	5.44	.44	.38

With regard to phase of treatment completion, the full model for relationship quality (including child report, parent report, and all associated higher order terms and interactions) was found to be a good fit for the data, predicting phase of completion significantly better than the intercept-only model. The model indicated a statistically significant interaction between child-reported relationship quality and parent-reported relationship quality. The interaction was interpreted with child-reported relationship quality serving as the moderator for plotting parent-reported relationship quality using simple slope analysis. Figures 2, 3, and 4 depict the graphed interactions for the odds of terminating in Phase 0, Phase 1 or 0, and Phase 2 or 1 or 0, respectively. (Note that the ordinal regression equation described above provides the natural log of the odds of terminating at or below a given phase. The odds of terminating at or below a given phase can then be obtained by raising *e* to the value of the equation output. This was done for ease of interpretation of the graphs below.) Again, it must be emphasized that the small sample size limits the weight which can be given to interpretation of these graphs. This model was based on data from 36 families, meaning that each of the nine individual points in the graphs represents only a few families.

For participants with low (and mean) child-reported relationship quality, increase in parent-reported relationship quality was associated with a decrease in the odds of terminating in an earlier phase of treatment. That is, when child-reported relationship quality was lower than parent-reported relationship quality, disagreement between parent and child predicted completing more phases of treatment. Agreement between parent and child with regard to low relationship quality was associated with terminating in an earlier phase of treatment. For participants with high child-reported relationship quality, the opposite was observed; increase in parent-reported relationship quality was associated with an increase in the odds of terminating in an earlier phase

of treatment. That is, when child-reported relationship quality was higher than parent-reported relationship quality, disagreement between parent and child predicted completing more phases of treatment. Agreement between parent and child with regard to high relationship quality was associated with terminating in an earlier phase of treatment. Given the sample size limitation noted above, differences between these points on the graphs may not be practically meaningful – particularly at high levels of parent-reported relationship quality, where child reports appear to converge. The comparatively larger discrepancies found at low levels of parent-reported relationship quality – where, again, parent—child agreement was associated with higher likelihood of early termination – can perhaps be given slightly more weight. Thus, for phase of treatment completion, the hypothesis that higher levels of parent—child agreement would predict higher likelihood of treatment completion is not supported. Looking at the other indicator of family functioning, interactions between parent and child report of monitoring did not significantly predict phase of treatment completion (see Table 7).

Figure 2

Predicted Odds of Terminating in Phase ≤ 0 as a Function of Parent-Reported Relationship Quality at Low, Mean, and High Values of Child-Reported Relationship Quality

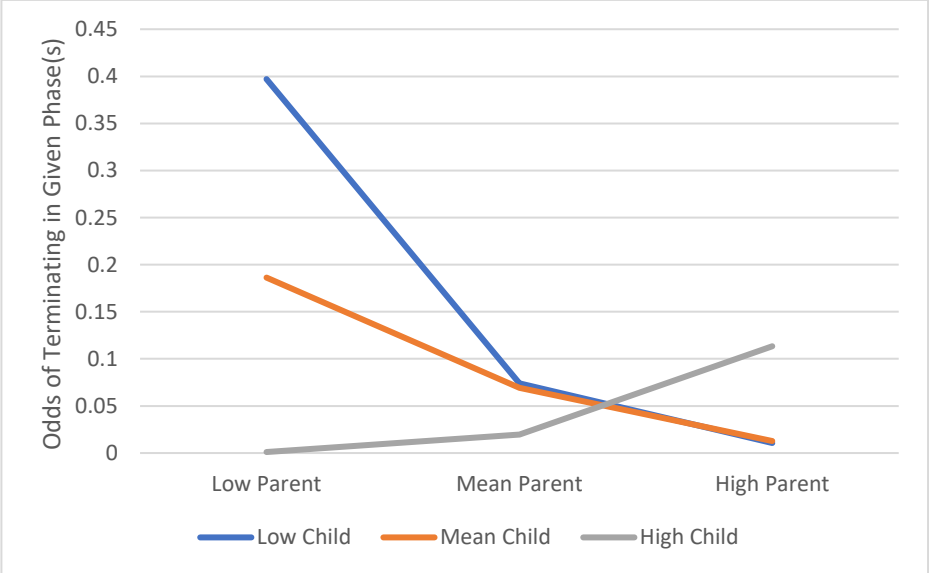

Figure 3

Predicted Odds of Terminating in Phase ≤ 1 as a Function of Parent-Reported Relationship Quality at Low, Mean, and High Values of Child-Reported Relationship Quality

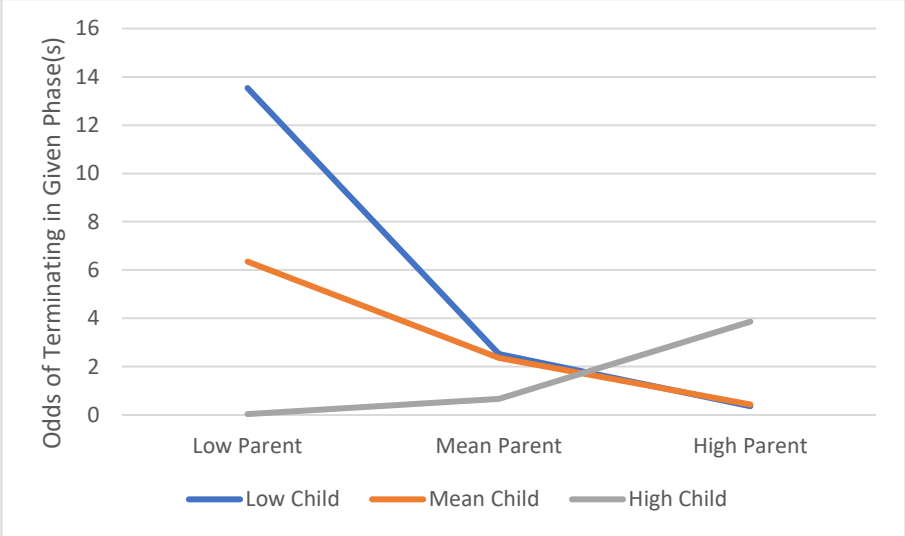

Figure 4

Predicted Odds of Terminating in Phase ≤ 2 as a Function of Parent-Reported Relationship Quality at Low, Mean, and High Values of Child-Reported Relationship Quality

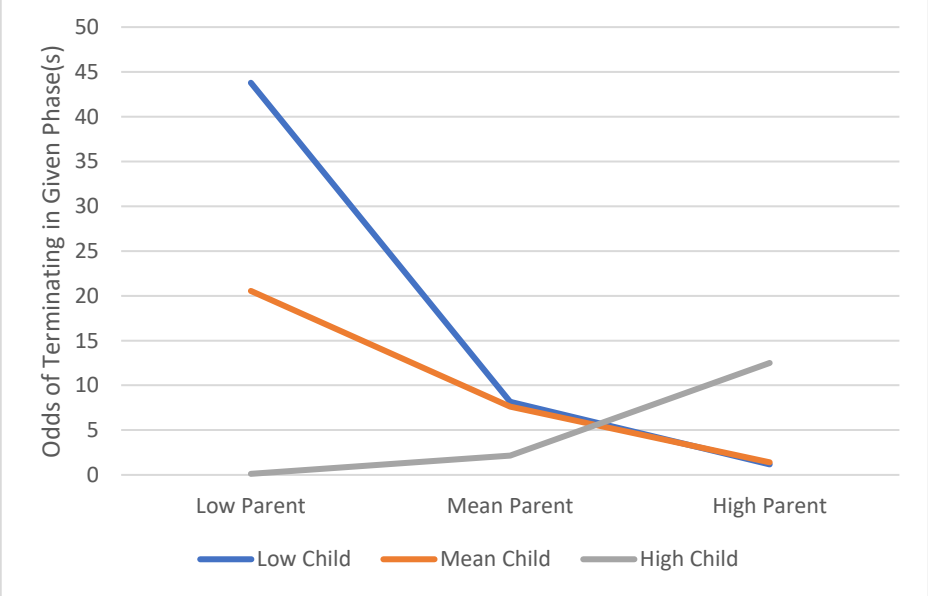

Table 10

Parent and Child Interactions as Predictors of FFT Phase at Termination (Hypothesis 2) – Relationship Model

	Nagelkerke Pseudo R^2	**χ^2 (df)**	***p***
	.47	20.21 (9)	.02
	β	***SE***	***p***
Child Report (C)	.62	1.50	.68
Parent Report (P)	.86	1.50	.57
Child X Parent (CP)	-3.85	1.68	.02*
Child Squared (C^2)	.92	1.13	.42
Parent Squared (P^2)	.79	1.63	.63
Child Squared X Parent (PC^2)	-3.07	2.13	.08
Parent Squared X Child (CP^2)	.62	2.71	.82
Child Cubed (C^3)	.32	.88	.72
Parent Cubed (P^3)	2.57	2.27	.26

* indicates a statistically significant interaction

Table 11

Parent and Child Interactions as Predictors of FFT Phase at Termination (Hypothesis 2) – Monitoring Model

	Nagelkerke Pseudo R^2	**χ^2 (df)**	***p***
	.27	10.11 (9)	.34
	β	***SE***	***p***
Child Report (C)	.62	1.03	.55
Parent Report (P)	2.55	1.46	.08
Child X Parent (CP)	-1.98	1.75	.26
Child Squared (C^2)	-.55	.75	.46
Parent Squared (P^2)	.29	1.76	.87
Child Squared X Parent (PC^2)	-1.93	2.12	.36
Parent Squared X Child (CP^2)	.93	2.12	.36
Child Cubed (C^3)	-.86	.63	.38
Parent Cubed (P^3)	-.75	1.17	.52

Hypothesis 3

Spearman's Rho was used to test the relationship between treatment completion and level of recidivism. Number of service hours was not significantly correlated with recidivism, though the relationship approached significance (r_s = -.30, p = .08). Phase of FFT at discharge was found to be significantly correlated with recidivism (r_s = -.37, p = .02). More advanced phase of FFT at discharge was associated with lower levels of recidivism in the year following involvement with court services. Fisher's z was used to test whether recidivism was more strongly correlated with one of the two different types of treatment completion (Weiss, 2011). This test indicated no significant difference in the strength of correlation between recidivism and either measure of treatment completion (z test statistic = .33, p = .74).

Results of Post Hoc Analyses

Following the planned preliminary and primary analyses, additional correlations were run to investigate potential relationships between pre-treatment child behaviors and outcome variables. Pre-treatment behaviors were operationalized as participant scores on the Ohio Youth Assessment System (OYAS, a risk and needs assessment tool administered to court-involved youth) and the severity of participants' initial offenses. Correlations were run between these variables, treatment completion (service hours and phase at termination), and one-year recidivism. All correlations were non-significant. The possibility of investigating therapist effects on treatment completion was considered but proved impractical given the high number of therapists (nine in total) within the relatively small sample.

DISCUSSION

The present study aimed to investigate predictors and outcomes of treatment completion in a high-risk sample of court-involved youth referred to Functional Family Therapy (FFT). Results of analyses provided support for the impact of treatment completion on socially salient outcomes; termination in a later phase of treatment was significantly associated with a lower rate of recidivism at one-year follow-up (Hypothesis 3). Results also identified aspects of family functioning which served as significant predictors of treatment completion. Specifically, the quality of the relationship between parent and child was positively associated with phase of treatment at termination, though not with number of service hours (Hypothesis 1a). This association was not observed for the other indicator of family functioning (parental monitoring), highlighting the importance of the baseline parent—child relationship as a factor which may influence the course of treatment. Additionally, parent report of both family functioning variables was found to predict treatment completion over and above child report (Hypothesis 1b).

Parent and Child Perspectives on Family Functioning

Predicting Treatment Completion

The distinction between parent and child report of family functioning merits further attention. Analyses found a significant difference between parent and child report of relationship quality (though not parental monitoring), with parents indicating lower average levels of relationship quality compared to children. This finding contrasts somewhat with the results of earlier studies, in which parents were more likely to report higher relationship quality. For instance, Leung and colleagues (2016) reported that mothers endorsed significantly higher family functioning (conceptualized to include factors such as harmony and parental concern) than did adolescents. Laird and De Los Reyes (2013) found that parents reported significantly higher

levels of parental acceptance than did adolescents, though parent report of conflict was significantly higher than adolescent report as well. It is worth noting that both of these studies were conducted with community-based samples (though Leung and colleagues worked with more high-risk participants, as they recruited families experiencing economic disadvantage in Hong Kong). Given that family functioning in the current study was assessed at a time when families were involved in court services due to adolescent offenses, it is perhaps not surprising that parents would be less inclined to think highly of their relationship than they might under other circumstances. As noted above, parent report was found to be more predictive of treatment completion than child report; however, when the interactions between these effects were included in analyses, child report was found to moderate the effect of parent report for models examining relationship quality. The implications of these interactions (with regard to Hypothesis 2) are discussed in more detail below. On a broad level, their existence underscores the nuanced relationship that may exist between different informant reports on a construct of interest. The higher predictive power of parent report may prompt researchers or clinicians to prioritize this viewpoint; however, the interactive effect of parent and child report offers additional insight which would be lost if child report were not considered.

Several of these findings align with the results of existing research. For instance, the observed significant difference between parent report and child report of relationship quality is consistent with earlier studies in which parents and children differed in their assessments of variables relevant to treatment (e.g., Tein et al., 1994; Cremeens et al., 2006; Salbach-Andrae et al., 2009). In contrast, the lack of significant difference between parent and child report of monitoring in the current study may reflect the objectivity of the construct in question. Karver (2006) identified observability of a behavior as a factor which appeared to predict agreement

between reporters. The construct of monitoring, assessed through questions pertaining to family rules and parental knowledge of child behavior, may have more observable elements than relationship quality, which includes an individual's subjective experience of support.

The finding that parent report of family functioning was a stronger predictor of treatment completion than child report may suggest support for the tendency observed by De Los Reyes and colleagues (2015), who noted that clinical decisions typically align with parent reports of treatment needs and goals, rather than child reports. Prioritization of the parental perspective should be considered in light of other research, though, which demonstrates the importance of the therapeutic alliance for treatment engagement and completion within family therapies (e.g., Robbins et al., 2006; Shelef et al., 2005). Exclusion of child considerations from treatment decisions may conceivably weaken the alliance between therapist and child. This may be especially true for adolescent populations (as in the current study), who likely are better able to express their views than younger children.

Parent—Child Agreement

Several hypotheses in this study received some degree of support from the current findings. However, the prediction that higher levels of agreement between parent and child would be related to higher likelihood of treatment completion (Hypothesis 2) was largely unsupported. Indeed, with regard to phase of completion, the opposite was found – parent—child dyads whose reports of relationship quality aligned with each other were more likely to terminate in an earlier phase than those who disagreed with each other. This was true for both high and low levels of reported relationship quality, though the odds of terminating in an earlier phase were highest for dyads who agreed that relationship quality was low, and child reports of relationship quality came close to converging at high levels of parent-reported relationship

quality. Looking at treatment completion operationalized as number of service hours, agreement between parent and child with regard to high relationship quality was associated with completing more service hours, suggesting some support for the hypothesis. For low relationship quality, though, parent—child agreement was associated with completing fewer service hours. Across these models, it should be emphasized that the small sample size (discussed in more detail below) significantly limits the weight which can be given to interpretation of the data.

Overall, these findings suggest that the mere fact of agreement between parent and child is insufficient to predict the course of treatment. Parents and children who jointly reported low relationship quality, for instance, appeared to be at higher risk for early termination. This echoes the contention of Laird and De Los Reyes (2013), who found that parent—child disagreement on constructs which they hypothesized to be of particular salience (including parental knowledge and acceptance) significantly predicted outcomes such as depression and antisocial behavior. The authors argued that "the meaning of congruence or discrepancy likely varies as a function of the construct being assessed and the outcome to which it is linked" (p. 12). The current findings add weight to the argument that agreement (or disagreement) should be interpreted within the context of the construct being measured.

At the outset of the current study, the agreement hypothesis assumed that parent—child dyads who entered treatment with a similar conceptualization of their relationship (whether positive or negative) would be more likely to engage in treatment, that their shared "story" would provide a foundation upon which they could build. Results suggest that this may not actually be the case. Families who agreed that their relationship quality was low emerged as the group least likely to continue with treatment, in analyses involving both phase of treatment completion and number of service hours. It is possible that agreement at the conceptual level (i.e., both parent

and child endorsing low relationship quality) reflected disagreement at the practical level (e.g., high conflict, low cohesion). This would be consistent with earlier findings that negative family interactions at the outset of treatment are associated with a lower likelihood of completing treatment (Shields et al., 1991), perhaps especially for adolescents from high-risk samples (Sunseri, 2004; Alexander et al., 1976). Of course, the finding that families who agreed on high relationship quality were more likely to terminate in an earlier phase of treatment contrasts with this reasoning. One could speculate that parent—child dyads in which each viewed their relationship in a positive light may have seen less value in engaging with a family-focused therapy. However, this finding exists alongside analyses which showed that parent—child dyads who agreed on high relationship quality were more likely to complete a higher number of service hours. Given these seemingly contradictory results, it may be prudent to refrain from definitive conclusions with regard to agreement on high relationship quality. Adding to this call for interpretive caution, discrepancies between parent and child report in all models were more pronounced at low levels of parent-reported relationship quality.

No known studies have directly considered parent—child agreement on a given construct as a predictor of treatment completion. While current findings shed some light on this area, they are perhaps most useful for the additional questions they raise. For instance, if parent—child agreement is best understood within the context of the sample and the construct being assessed, what other constructs might be relevant to the likelihood of treatment completion? Functional Family Therapy assumes that relationship dynamics within the family are of paramount importance; it may be helpful to assess the degree to which parents and adolescents agree with this assertion, in addition to their perspectives on family functioning itself. Conceivably, court involvement in the lives of adolescents may highlight the importance of external factors in the

minds of family members, shifting parent or adolescent focus away from their own relationships. Parent—child agreement on the goals of therapy and their intention to engage with treatment could serve as additional robust predictors of treatment completion.

Premature Termination

Operationalization

Other aspects of current findings may offer some insight on questions arising from prior research. With regard to the association between higher treatment completion and lower rates of recidivism, this correlation was significant for phase of treatment at termination but not for number of service hours (though the correlation approached significance). As each phase of FFT is associated with attainment of specific goals, this finding suggests that treatment completion may be most usefully operationalized in terms of goal attainment within therapy rather than "dosage" when considering long-term outcomes. However, it should also be noted that number of service hours within the present study included any contact between clients and the treatment provider (e.g., phone calls); it is possible that this approach artificially inflated the number of treatment-focused service hours clients received.

Rate of Premature Termination

As described above, reported rates of premature termination vary between studies and populations. A potentially conservative estimate drawing from general population data suggests that 20% of clients discontinue therapy prematurely. Studies of court-involved populations yielded premature termination rates ranging from 27.7 to 76.1%. Adolescents and children presenting to treatment with significant externalizing behavior problems were reported to prematurely terminate services at rates ranging from 27 to 51%. These values provide a framework for understanding the current findings, in which more than half of participants

terminated either during or prior to Phase 1, the initial engagement stage of FFT. An additional 16.7% of participants terminated during Phase 2, leaving scarcely more than a quarter of participants who remained enrolled to the maintenance and generalization stage (Phase 3). These results, though perhaps disheartening, are not incongruent with the previously reported rates for similarly high-risk populations. The current findings highlight the importance of better understanding factors which may contribute to premature termination of services by families who may be most in need of them.

Likelihood of Premature Termination

Looking at the association between higher relationship quality at treatment outset and higher likelihood of remaining in treatment through a later phase, this finding lends some weight to the contention that clients with less severe problems at the outset of treatment may be less likely to terminate prematurely (Kazdin et al., 1994). This would seem to contrast with the post-hoc finding that participant risk scores on the Ohio Youth Assessment System (OYAS) were not significantly correlated with length of treatment enrollment. It is possible that the broad-based nature of OYAS risk scores did not reflect the family dynamics most salient to treatment within FFT. Also important to consider, the significant association was observed only within the primary analyses, when the higher report of relationship quality was used in cases where both parent and child report were available. When parent and child report were individually correlated with treatment completion, no significant association was found between treatment phase at discharge and any family functioning variables. Significant correlations were found between parent-reported family functioning and number of service hours, but this association did not emerge in analyses which took the higher of either parent or child report. Taking these results together, it appears that the interpretation of higher relationship functioning predicting

longer treatment engagement should be applied cautiously. It may well be that families with less interpersonal distress are less likely to disengage from treatment. However, it is also possible that the small sample size within the current study (discussed below) lent undue weight to the reports included in the described analyses. Alternatively, although no known studies have considered whether more positive perspectives in informant pairs have higher predictive power, this possibility may be worth considering as well.

Strengths and Limitations

One of the methodological strengths of this study was its inclusion of multiple informants. As demonstrated above, comparing the perspectives of both members of a parent—child dyad on facets of their family functioning allowed for a more nuanced understanding of the family unit at the outset of treatment. Additionally, outcome variables were drawn from administrative and judicial records, sources distinct from study participants. The collection of data at multiple timepoints lent strength to the study as well. With family functioning assessed at treatment outset, treatment completion defined based on subsequent engagement, and recidivism measured over the year following treatment, it was possible to speculate on causal relationships between sequential variables. A final strength was the demographic makeup of the study sample, which consisted primarily of Black/African American youth. As previously noted, early research on FFT often included primarily Caucasian samples, a hole which has only recently begun to be filled by additional studies.

In spite of these strengths, the current study was limited by its relatively small sample size. Although the total sample of 42 participants was comparable in size to those found in some early FFT process and efficacy studies (e.g., Alexander & Parsons, 1973; Robbins et al., 2003), it was notably smaller than the sample sizes employed in more recent research on FFT and in

studies investigating discrepancies between multiple informants (e.g., Humayun et al., 2017; Laird & De Los Reyes, 2013; Leung et al., 2016). Within the current study, it is possible that the influence of individual participants was magnified by the relatively small sample. For instance, as noted above, each point on the graphs designed to probe Hypothesis 2 (presented in Figures 1-4) represents only a few participant families. Moreover, due to instances of missing data, sample size varied slightly between analyses. The inclusion of 37 parent reports in preliminary correlation analyses concerning phase of treatment completion, for instance, contrasted with the 42 parent or child reports in primary analyses – a difference which might have contributed to the findings noted above with regard to Hypothesis 1a. Additionally, the number of analyses run to test the hypotheses of the study increases the likelihood of significant findings occurring by chance (Goldman, 2008). Primary analyses included 12 correlations and 12 regression models. Using the equation $P = 1 – (1 – \alpha)^k$, with alpha (α) set to 0.05 and k representing the number of null hypotheses tested, the probability that at least one significant finding was due to chance is 70.80%. This adds an additional note of caution to interpretation of the results presented here; patterns of findings across analyses must be given greater weight than any individual finding.

Another limitation of the current study was the lack of available information on the formulation and attainment of treatment goals. Although completion of a given phase was taken as a proxy measure of goal attainment (given the structure of FFT), more specific detail would have allowed a closer examination of this construct. Additionally, parent and child perspectives on the aims of treatment might have served as more robust predictors of treatment engagement and completion than their perspectives on family functioning more generally.

Conclusion

Perhaps the most significant conclusion from the current study is the necessity of appreciating nuance in the parent—child relationship, particularly as it pertains to course of

treatment for court-involved youth. Identifying relationship quality as a significant predictor of treatment completion provided a viable foundation for considering this issue, but it was only when reports from both members of the parent—child dyad were examined in conjunction with each other that the group at highest risk for premature termination – those who demonstrated agreement that relationship quality was low – could be identified. The importance of identifying such predictors is underscored by the finding that treatment completion was significantly associated with a lower rate of recidivism in the year following involvement with services.

Among the myriad factors that may influence likelihood of completing Functional Family Therapy, parent and child report of relationship quality therefore emerges as a promising avenue for screening and support, with implications both for individual clients and for their encompassing communities. The apparent importance of initial relationship quality in likelihood of completion is particularly notable given that FFT assumes relatively low family functioning at the outset of treatment; the initial phases of treatment are designed to enhance motivation for engagement and target family dynamics which may interfere with change. However, even proponents of FFT have observed that negative family interactions are often associated with premature termination of treatment (Sexton & Alexander, 2002). Such observations highlight the importance of therapist attendance to such factors, particularly at the outset of therapy; previous studies have shown that therapists who successfully reframe negative family interactions and provide a balance of support and structure in sessions achieve more positive treatment outcomes (Sexton & Alexander, 2002). In considering successful implementation of FFT, fidelity of delivery therefore becomes an important factor. Sexton and Turner (2010) demonstrated that adolescents whose FFT therapists displayed high adherence to the treatment model had a significantly lower rate of recidivism, while adolescents whose therapists

demonstrated low adherence had recidivism rates significantly higher than the control group. Moreover, an interaction was observed such that families with the highest level of risk were more likely to achieve success in treatment when their therapists had high adherence to the FFT model. Although therapist effects and treatment fidelity were not assessed in the current study, variation in such factors may have contributed to the observed dropout rate within this already high-risk sample.

Taken together, the current findings underscore the high risk of premature termination from services for court-involved adolescents, highlight the apparent importance of the parent—child relationship, and suggest the need for careful monitoring of treatment implementation among therapists administering FFT.

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APPENDIX A: PARENT—CHILD RELATIONSHIP QUESTIONNAIRE

Parent-report questions

	Almost Never	Rarely	Sometimes	Often	Almost Always
1. Do you and your child argue and fight with each other?	0	1	2	3	4
2. How often do you feel disappointed with your child?	0	1	2	3	4
3. How often do you feel proud of your child?	0	1	2	3	4
4. How well do you think that you and your child understand each other?	0	1	2	3	4
5. Do you wish that your child was different?	0	1	2	3	4
6. Do you accept your child the way she or he is?	0	1	2	3	4
7. Does your child usually support and encourage you?	0	1	2	3	4
8. How often do you feel angry or irritated by your child?	0	1	2	3	4

Youth-report questions

	Almost Never	Rarely	Sometimes	Often	Almost Always
1. Do you and your parent argue and fight with each other?	0	1	2	3	4
2. How often do you feel disappointed with your parent?	0	1	2	3	4
3. How often do you feel proud of your parent?	0	1	2	3	4
4. How well do you think that you and your parent understand each other?	0	1	2	3	4
5. Do you wish that your parent was different?	0	1	2	3	4
6. Do you accept your parent the way she or he is?	0	1	2	3	4
7. Does your parent usually support and encourage you?	0	1	2	3	4
8. How often do you feel angry or irritated by your parent?	0	1	2	3	4

APPENDIX B: PARENT—CHILD MONITORING QUESTIONNAIRE

Parent-report questions

	No, Never	Rarely	Sometimes	Often	Yes, Almost Always
9. Do you know what your child does during his/her free time?	0	1	2	3	4
10. Do you know who your child has as friends during their free time?	0	1	2	3	4
11. Do you usually know what type of homework your child has?	0	1	2	3	4
12. Do you know what your child spends money on?	0	1	2	3	4
13. Do you usually know when your child has an exam or paper due at school?	0	1	2	3	4
14. Do you know how your child is doing in different subjects at school?	0	1	2	3	4
15. Do you know where your child goes when they are out with friends at night?	0	1	2	3	4
16. Do you normally know where your child goes and what they are doing after school?	0	1	2	3	4
17. In the last month, have you talked with your child about their friends?	0	1	2	3	4
18. How often do you talk with your child's friends when they come to your home (ask what they do or what they think and feel about different things)?	0	1	2	3	4
19. During the past month, how often have you started a conversation with your child about their free time?	0	1	2	3	4
20. How often do you initiate a conversation with your child about things that happened during a normal day at school?	0	1	2	3	4
21. Do you usually ask your child to talk about things that happened during their free time (whom they met when they were out in the city, free time activities, etc.)?	0	1	2	3	4
22. Does your child need to have your permission to stay out late on a weekday evening?	0	1	2	3	4
23. Does your child need to ask you before they can decide with their friends what they will do on a Saturday evening?	0	1	2	3	4
24. If your child has been out very late one night, do you require that they explain to you what they did and whom they were with?	0	1	2	3	4

	No, Never	Rarely	Sometimes	Often	Yes, Almost Always
25. Do you always require that your child tell you *where* they are at night, *who* they are with, and *what* they do together?	0	1	2	3	4
26. Before your child goes out on a Saturday night, do you require them to tell you where they are going and with whom?	0	1	2	3	4
27. Does your child talk at home about how they are doing in the different subjects in school?	0	1	2	3	4
28. Does your child usually talk about how school was when they get home (how they did on different exams, their relationships with teachers, etc.)?	0	1	2	3	4
29. Do you feel your child keeps a lot of secrets from you about what they do during their free time?	0	1	2	3	4
30. Do you think your child hides a lot from you about what they do during nights and weekends?	0	1	2	3	4
31. If your child is out at night, when they get home, do they tell you what they have done that evening?	0	1	2	3	4

Youth-report questions

	No, Never	Rarely	Sometimes	Often	Yes, Almost Always
9. Does your parent know what you do during your free time?	0	1	2	3	4
10. Does your parent know who you have as friends during your free time?	0	1	2	3	4
11. Does your parent usually know what type of homework you have?	0	1	2	3	4
12. Does your parent know what you spend money on?	0	1	2	3	4
13. Does your parent usually know when you have an exam or paper due at school?	0	1	2	3	4
14. Does your parent know how you are doing in different subjects at school?	0	1	2	3	4
15. Does your parent know where you go when you are out with friends at night?	0	1	2	3	4
16. Does your parent normally know where you go and what you are doing after school?	0	1	2	3	4

	No, Never	Rarely	Sometimes	Often	Yes, Almost Always
17. In the last month (or, the last month before your detention), have your parents ever had no idea where you were at night?	0	1	2	3	4
18. In the last month, have you talked with your parent about your friends?	0	1	2	3	4
19. How often does your parent talk with your friends when they come to your home (ask what they do or what they think and feel about different things)?	0	1	2	3	4
20. During the past month, how often has your parent started a conversation with you about your free time?	0	1	2	3	4
21. How often does your parent initiate a conversation with you about things that happened during a normal day at school?	0	1	2	3	4
22. Does your parent usually ask you to talk about things that happened during your free time (who you met when you were out in the city, free time activities, etc.)?	0	1	2	3	4
23. Do you need to have your parent's permission to stay out late on a weekday evening?	0	1	2	3	4
24. Do you need to ask your parent before you can decide with your friends what you will do on a Saturday evening?	0	1	2	3	4
25. If you have been out very late one night, does your parent require that you explain to them what you did and whom you were with?	0	1	2	3	4
26. Does your parent always require that you tell them *where* you are at night, *who* you are with, and *what* you do together?	0	1	2	3	4
27. Before you go out on a Saturday night, does your parent require you to tell them where you are going and with whom?	0	1	2	3	4
28. Do you talk at home about how you are doing in the different subjects in school?	0	1	2	3	4
29. Do you usually talk about how school was when you get home (how you did on different exams, your relationships with teachers, etc.)?	0	1	2	3	4
30. Do you keep a lot of secrets from your parent about what you do during your free time?	0	1	2	3	4

	No, Never	Rarely	Sometimes	Often	Yes, Almost Always
31. Do you hide a lot from your parent about what you do during nights and weekends?	0	1	2	3	4
32. If you are out at night, when you get home, do you tell your parent what you have done that evening?	0	1	2	3	4