Children and Youth Services Review 104 (2019) 104353

Contents lists available at ScienceDirect

Children and Youth Services Review

journal homepage: www.elsevier.com/locate/childyouth

Outcomes of the Iowa Parent Partner program evaluation: Stability of reunification and re-entry into foster care☆

Jeff M. Chambers[a], Sandy Lint[b], Maggie G. Thompson[a,*], Matthew W. Carlson[a], Michelle I. Graef[a]

[a] Center on Children, Families, and the Law, University of Nebraska-Lincoln, 206 S. 13th Street, Suite 1000, Lincoln, NE 68588, USA
[b] Iowa Department of Human Services, 417 E. Kanesville Blvd, Des Moines, IA 51503, USA

ARTICLE INFO

Keywords:
Child welfare
Parent partner
Mentoring
Reunification
Subsequent removal
Wraparound

ABSTRACT

In an effort to facilitate family engagement with services, improve reunification outcomes, and empower the families they serve, child welfare agencies across the country have developed and implemented programs designed to provide peer mentoring. These programs work to identify parents who have successfully navigated the child welfare system in the past and train them to mentor parents who are currently in the system. The current study used a quasi-experimental design and propensity score matching to examine the outcomes for children of families served by the Iowa Department of Human Services Parent Partner program, one of the earliest and most established programs in the country. Results indicated that the children of program participants were significantly more likely to return home at discharge from their foster care placement than the children of matched non-participants. Additionally, Iowa Parent Partner program participants were significantly less likely to have a subsequent child removal within 12 months of the child returning home than matched non-participants. No significant differences were found between the children of program participants and children of matched non-participants in the total time in out of home care or subsequent child removal within 24 months of returning home. These results suggest that participating in the Iowa Parent Partner program can meaningfully improve the outcomes of children and families. Limitations and implications of the current study, as well as recommendations for future research, are discussed.

1. Introduction

Current data suggest that children are being removed from their homes and placed into foster care at increasing rates. For example, the most recent Adoption and Foster Care Analysis and Reporting System (AFCARS) Report (#24) stated that the number of children in foster care increased by 10,100 between 2015 and 2016, and these youth stayed in foster care for an average of almost two years (Children's Bureau, 2017). Family reunification is a primary goal of the child welfare system (Promoting Safe and Stable Families Act of 1997, 42 U.S.C. § 629 [2003]; U.S. DHHS, 2000; Wulczyn, 2004), though juvenile courts require evidence of parental engagement in the services that are intended to treat the parents' behaviors that lead to the child (ren)'s removal (Berrick, Cohen, & Anthony, 2011), provide a safer home environment for the child(ren), and minimize the risk of the child (ren)'s reentry into the system (D'Andrade, 2015; Wells & Correia, 2012). Though the steps towards reunification are clear, facilitating a change in parents' behaviors can be challenging as evidenced by the fact that successful reunifications only occur in 50% of cases where youth are removed and that this number has not changed in recent decades (Children's Bureau, 2017; Wulczyn, 2004).

For families with removed youth, the process of reunification and behavior change is typically coordinated by a case worker who refers parents to appropriate service providers and, ideally, continues to partner with the families throughout the process. Active partnering between the case worker and the parents has been documented to result in better alignment between the families' needs and formal case planning, which increases family commitment and compliance to the case plan (Nilsen, Affronti, & Coombes, 2009). However, the reality is that child welfare workers are not always able to be a fully engaged partner

☆ This work was made possible in part through HHS/ACF/ACYF/Children's Bureau cooperative agreement #90CO1043 to the University of Nebraska-Lincoln for the Midwest Child Welfare Implementation Center, and through a contract for program evaluation services from the Iowa Department of Human Services to the University of Nebraska-Lincoln. Sandy Lint (co-author) is the Community Partnership State Manager for the Iowa Parent Partner program.

* Corresponding author.
E-mail addresses: jchambers2@unl.edu (J.M. Chambers), slint@dhs.state.ia.us (S. Lint), Maggie.thompson@unl.edu (M.G. Thompson), mattcarlson@unl.edu (M.W. Carlson), mgraef1@unl.edu (M.I. Graef).

https://doi.org/10.1016/j.childyouth.2019.05.030
Received 24 January 2019; Received in revised form 24 May 2019; Accepted 24 May 2019
Available online 27 May 2019
0190-7409/ Published by Elsevier Ltd.

with their families because of high caseloads (GAO, 2003; Marcenko, Brown, DeVoy, & Conway, 2010), burdensome paperwork (Falk, 2015; Marcenko et al., 2010), and increased levels of stress and burnout (Anderson, 2000; Mor Barak, Nissly, & Levin, 2001). Many birth parents also find it difficult to trust and relate to their case workers. Indeed, Berrick et al. (2011) note a distinct "social distance" between child welfare workers and birth parents that can make interactions feel adversarial. These tensions can result in parents feeling like there is no one who truly understands them or is really "on their side," which can compromise their level of engagement in services and, thus, their likelihood of successful reunification with their child(ren). Additionally, the lack of equality in social and structural power further creates interpersonal separation between workers and the parents they intend to serve (Reich, 2005; Thoits, 2006). Between the increasing number of youth in foster care, low reunification rates, and barriers that case workers face in striving to facilitate families' reunification process, it is evident that unique solutions are needed to assist parents in implementing behavioral changes, providing safe and stable rearing environments, and having previously removed children successfully returned home.

1.1. Parent Partner programs

In an effort to help bridge the gap in trust and equality between workers and parents, improve reunification outcomes for families, and empower the families that workers serve, child welfare agencies across the country have begun implementing parent partner programs (Bohannan, Gonzalez, & Summers, 2016; Capacity Building Center for States, 2016; Leake, Longworth-Reed, Williams, & Potter, 2012; Summers, Wood, Russell, & Macgill, 2012). These programs identify parents who were previously involved in the child welfare system due to child protection issues and who overcame interpersonal obstacles through their own recovery process to achieve reunification with their children. Individuals who meet these criteria are recruited and formally trained to mentor parents that are currently navigating the child welfare system while their children are in foster or kinship care (Cohen & Canan, 2006; Leake et al., 2012; Oates, Lint, & Persons, 2016; Williamson & Gray, 2011). Parent partners work to validate parents' experiences and perspectives while helping to hold parents accountable to making the behavioral changes necessary for reunification (Layzer, Goodson, Bernstein, & Price, 2001). Parent partners serve as role models, demonstrate effective communication, promote self-advocacy, provide individualized support to the parents they are assigned, and often collaborate with or train agency staff on how to more successfully interface with parents (Cohen & Canan, 2006; Frame, Conley, & Berrick, 2006; Leake et al., 2012; Lothridge, McCroskey, Pecora, Chambers, & Fatemi, 2012; Oates et al., 2016; Polinsky, Levine, Pion-Berlin, Torres, & Garibay, 2013). Additionally, parent partners network within communities and collaborate with case workers and providers to meet the needs of families, facilitate trainings and learning opportunities, assist in policy and program development, and change community perceptions about the system of child welfare (Cohen & Canan, 2006). While the specific roles and responsibilities of parent partners can vary across programs (Frame, Berrick, & Knittel, 2010), the overarching goal of effective parent partner programs is to use a peer-mentoring model to actively engage and connect parents with the formal service systems that parents must utilize to achieve successful reunification (Chaffin, Bonner, & Hill, 2001; Cohen & Canan, 2006; Layzer et al., 2001).

While parent partner programs have shown some promise for improving distal outcomes such as increased placement stability, few studies have rigorously examined their effectiveness or have attempted to directly link intervention activities to child welfare-related outcomes (Leake et al., 2012). For example, previous research has demonstrated the positive effects of peer support interventions on increased parent engagement and knowledge (Center for Social Services Research, 2004; Layzer et al., 2001; Summers et al., 2012), expanded social networks (Budde & Schene, 2004), improved family functioning and parenting skills (Layzer et al., 2001), and improved youth functioning (Suter & Bruns, 2009). In a cross-sectional study, Bohannan et al. (2016) demonstrated increased engagement and reunification rates for families who participated in a peer-mentoring program compared to families who did not participate. Additionally and via a quasi-experimental study, Berrick et al. (2011) found that parents who engaged in a parent partner program evinced higher reunification rates compared to matched controls. Though these emerging findings begin to demonstrate the utility of parent partner programs, further rigorous evaluations of parent partner programs are needed to satisfy the increased emphasis on promoting evidence-based practices to strengthen family functioning (Family First Prevention Services Act, 2018).

The current study aims to extend the body of research evidence on the effectiveness of parent partners who are working with child welfare-involved parents. Data for this study were taken from a large, state-level sample of parents who participated in a parent partner program based on the Iowa Parent Partner Approach. The current study aims to: (a) examine how the program influenced youths' lengths of stay in out-of-home care compared to the children of non-participant parents; (b) test whether children of parents involved in the program were more likely to be discharged from their foster care placement to reunification than the children of non-participant parents; and (c) investigate whether the children of Parent Partner program participants were less likely to be subsequently removed from the home within 12 and 24 months of reunification than the children of non-participant parents.

2. Iowa Parent Partner approach

2.1. Program overview

The Iowa Parent Partner Approach is a model of parent partner programming that seeks to reduce re-abuse rates and increase reunification rates by pairing parents whose children have been removed from the home and are presently receiving child protection services with parents who were formerly involved with the child welfare system due to child protection issues but achieved successful reunification. Parent partners are selected based on their interpersonal skills, success within the child welfare system, and proven abilities to overcome obstacles. Additionally, the program values the participation from individuals with a variety of backgrounds. Iowa parent partners provide support, guidance, motivation, and hope to their parent mentees and work with social workers, legal professionals, community-based organizations, and other professionals to provide resources for the parents they are mentoring. In Iowa, parent partners also share their experiences and offer recommendations through foster/adoptive parent training, new child welfare worker orientation, local and statewide planning/steering committees and conferences, and Community Partnership participation. Lastly, parent partners build trust and bridge connections between the child welfare worker and other professionals with the family (Iowa Department of Human Services, 2018).

How agencies define and implement their parent partner programs can vary greatly in formality and structure as well as what roles and responsibilities they endow upon the parent partners (Frame et al., 2010). The responsibilities of Iowa parent partners include completing required and supplemental training curricula, working intensively to engage parents in case plan activities to increase the likelihood of reunification, providing parental advocacy and support, and collaborating with agency personnel and community partners (Iowa Department of Human Services, 2018). More information about the responsibilities of Iowa Parent Partners and the history of the program can be found at https://dhs.iowa.gov/parent-partners.

2.2. Program design

Iowa Parent Partner services are available to any family that has had

their child removed from the home with the exception of removals due to sexual abuse perpetrated by the parent or another party in the home. Parents who can only reside with their children under special conditions directed by the courts (i.e. substance abuse treatment or relative care) are able to participate. There is also flexible funding associated with parent partners that can be utilized specially for individualized family needs. The Parent Partner Approach is voluntary and those who decline receive traditional child welfare services.

Families may be referred to the Parent Partner program during the initial assessment, an early Family Team Decision-Making meeting, or at the beginning of case management. Generally speaking, Iowa families with child welfare involvement are informed of the Parent Partner mentoring program and associated services during the removal of their children by their assessment and/or case worker. The case worker then makes a referral to the local parent partner coordinator for that parent. Iowa parent partners are grouped by regional areas, some of which are single counties while others cover multiple counties.

When a family is referred to the program, the local regional parent partner coordinator reviews the basic information provided with the referral and identifies a parent partner that would be a good fit with the family's situation. Parent partner coordinators try to match participants with parent partners who have had similar experiences and history such as challenges with substance abuse, mental health problems, and domestic violence. The identified parent partner then reaches out to the parent to introduce themselves and offer parent partner services.

Specific criteria to become an Iowa parent partner are established to ensure that future parent partners clearly overcame the issues that initially involved them with DHS Meeting (Iowa Department of Human Services, 2018). These criteria did not automatically designate someone as a parent partner but instead provided a framework for recruiting potential parent partners. Complete information about the criteria to become an Iowa parent partner can be found at https://dhs.iowa.gov/parent-partners.

3. Present study

The focus of the current study is to evaluate the extent to which the Iowa Parent Partner program achieved its intended child and family outcomes. Following previous research, the primary outcomes examined in this study are the length of stay in out-of-home care (Cohen & Canan, 2006; Shaw, 2006), family reunification rates (Cohen & Canan, 2006; D'Andrade, 2015), and subsequent removals by 12 and 24 months post-reunification (Needell et al., 2009; Shaw, 2006; Victor et al., 2016; Wells & Correia, 2012). The identified participants for this analysis were the Iowa families that had a child protective services investigation start date between 2011 and 2014 and experienced the removal of a child from the home. The current study aimed to answer the following research questions that are displayed below along with their corresponding hypotheses:

- Research Question 1: Do the children of Parent Partner program participants have reduced lengths of stay in out-of-home care compared to the children of non-participant parents?
  - o **Hypothesis 1.** The children of Parent Partner program participants will have reduced lengths of stay in out-of-home care compared to the children of non-participant parents.
- Research Question 2: Are the children of Parent Partner program participants more likely to be discharged from their foster care placement to reunification ("return home") than the children of non-participant parents?
  - o **Hypothesis 2.** The children of Parent Partner program participants will be more likely to be discharged from their foster care placement to reunification ("return home") than the children of non-participant parents.
- Research Question 3a: Are the children of Parent Partner program participants less likely to be subsequently removed from the home within 12 months of reunification than the children of non-participant parents?
  - o **Hypothesis 3a.** The children of Parent Partner program participants will be less likely to be subsequently removed from the home within 12 months of reunification than the children of non-participant parents.
- Research Question 3b: Are the children of Parent Partner program participants less likely to be subsequently removed from the home within 24 months of reunification than the children of non-participant parents?
  - o **Hypothesis 3b.** The children of Parent Partner program participants will be less likely to be subsequently removed from the home within 24 months of reunification than the children of non-participant parents.

4. Methods and materials

4.1. Design and procedure

The study utilized a quasi-experimental design, defined by Shadish, Cook, and Campbell (2002) as one "in which units are not assigned to conditions randomly" (p. 12) and participants may be assigned to treatment conditions through the process of self-selection (p. 14). Families who participated in the Parent Partner program were matched with non-participant families via propensity score matching in an attempt to closely replicate the effects of randomization (see Stuart & Rubin, 2007). Matching participant and non-participant groups on multiple relevant, observable characteristics has widely been shown to increase confidence in treatment impact in non-experimental settings by significantly reducing selection biases that could confound treatment results (Brand & Halaby, 2006; Dehejia & Wahba, 1999; Dehejia & Wahba, 2002; Heckman, Ichimura, Smith, & Todd, 1996; Heckman, Ichimura, Smith, & Todd, 1998; Heckman, Ichimura, & Todd, 1997; Heckman, Ichimura, & Todd, 1998; LaLonde, 1986; Reynolds & DesJardins, 2009; Rosenbaum & Rubin, 1985; Rubin, 1979; Titus, 2007). This is accomplished by balancing group covariates, sub-classifying the groups, and performing regression adjustments (Caliendo & Kopeinig, 2008; D'Agostino, 1998; Frolich, 2004). The utilization of matching has a rich history in a wide variety of research domains such as economics, job training, higher education, and medicine. Additionally, matching has also been used in child welfare research to address selection bias in studies comparing permanency outcomes among children in kinship and non-kinship foster care (Koh & Testa, 2008), the effects of parent substance abuse services on recurrences of child maltreatment, (Guo, Barth, & Gibbons, 2006), the influence of corporal punishment on children's behavior (Morris & Gibson, 2011), and the effects of a family group decision making intervention (Weigensberg, Barth, & Guo, 2009). More information on the matching conducted for the current study can be found in Section 4.4 below.

4.2. Data

Data for this study were drawn from two sources: The Iowa Department of Human Services Statewide Automated Child Welfare Information System (DHS SACWIS) and the Iowa Parent Partner program database. Data from both sources were included for calendar years 2011, 2012, 2013, and 2014. The Iowa DHS investigation start date determined the date used to identify the date of the case. This study included only those participants enrolled in the program through 2014 as an analysis of the subsequent removal outcome required at least two years of post-intervention data.

4.3. Participants

All families with children involved in the child protective services system and living in service areas where the program was offered had

the right to request a referral to the Iowa Parent Partner program and could accept those services on a voluntary basis. The potential pool of subjects included all families with children removed from their home by the Iowa Department of Human Services, Child Protection Services from 2011 through 2014. The families in this study included both single and co-parenting family units. Co-parents could be assigned the same parent partner or request to be assigned to different ones. Within any given family in which a removal had occurred, the youngest child was designated the child of interest and was the focus of outcome data collection. The decision to designate the youngest child as the child of interest is supported by demographic data of child victims, which indicate that younger children are often the most vulnerable to maltreatment (Children's Bureau, 2016).

Families who completed a parent partner program intake assessment and began active engagement with the program (defined as participation in at least two Parent Partner service activities) within 60 days of intake were included in this study. A total of 835 parent partner records were identified; 500 parent partner cases were included in analyses and 335 cases with parent partner intakes were excluded from analyses due to evincing one or more of the following exclusionary criteria:

- The DHS foster care placement was still open ($n = 44$).
- The parent refused parent partner services after initial acceptance and entry; the parent was not able to be contacted by the parent partner, moved out of state, or was placed in an institutional situation; the parent participant did not engage with the assigned parent partner; and/or the time between the child's removal from the home and the referral to the Parent Partner program exceeded six months ($n = 248$).
- The reason for removal from the home was only for physical abuse (this was used as an exclusion criteria due to the very low number of cases that included physical abuse as the only allegation) ($n = 39$).
- A suitable matched non-participating family could not be identified ($n = 12$).

The potential non-parent partner pool was composed of 4344 families who had children involved in the Iowa child protection system during the same time period. The control group consisted of both parents who chose not to participate in the Iowa Parent Partner program and also parents who lived in areas where the program is not offered. From these data, one-to-one matches with the parent partner participating families were drawn for analysis of differences between the matched pairs on the identified outcomes. See Fig. 1 for a diagram of the selection choices for treatment and control samples.

4.4. Matching

The matching technique used to create a comparison group was propensity score matching (PSM). PSM creates a probability that expresses how likely a participant is to be assigned to or to select the treatment condition given certain observed characteristics (Caliendo & Kopeinig, 2008; D'Agostino, 1998; Frolich, 2004; Rosenbaum & Rubin, 1983; Thoemmes & Kim, 2011). Padgett, Salisbury, An, and Pascarella (2010) suggest that PSM methodology is most effective when used "to make a within-study comparison between nonrandomized design estimates adjusted with propensity score methods and results from a randomized experiment" (p. 32). Since a family's participation in the Parent Partner program was voluntary and random assignment to the program was not an option due to ethical concerns from agency leadership, PSM was used in this evaluation to simulate a random assignment to treatment versus non-treatment conditions. The propensity scoring module within IBM SPSS Statistics Version 23.0 was used to create matched pairs.

Propensity scores were calculated for parent partner families and non-parent partner families based upon the following factors in the Iowa DHS SACWIS dataset: *Child's Age, Child's Gender, Child's Race, Child's Ethnicity, Prior Removals from the Home, Reason for Removal is Neglect, Reason for Removal is Parental Drug Abuse, Reason for Removal is Parental Alcohol Abuse, Finding of Neglect, Number of Iowa DHS Findings,* and *Polk County (MSA)* vs *Balance of State (non Polk)*. These factors were chosen based on: 1) existing research evaluating factors relevant to reunification and permanency rates as potential predictors and confounds, and 2) discussions with the Parent Partner program stakeholders regarding variables of interest and the population served. These factor selections aligned with research emphasizing the importance of selecting a rich set of matching factors based on theory, knowledge of previous research, and information about the organizational setting (Caliendo & Kopeinig, 2008; D'Agostino Jr., 1998; Dehejia, 2005; Luellen, Shadish, & Clark, 2005; Padgett et al., 2010; Thoemmes & Kim, 2011).

PSM scores were computed for each cohort year in order to ensure that parent partner families with investigation start dates in any given year were matched only with non-parent partner families with investigation start dates in that same year. The data for each cohort year were then combined into a single matched-pair file across years.

Matching algorithms were used to pair parent partner participant cases to non-participant cases. The match algorithm consisted of a match tolerance set to 0.02 (i.e., the standard deviation of propensity scores was 0.1476 and 1/4 of the standard deviation of propensity scores for this sample was 0.0369, following leading recommendations), without replacement (i.e., once a case is used it is no longer available for a subsequent match), with maximum match priority to exact matches, and random selection from multiple eligible matches (Guo & Fraser, 2010; Rosenbaum & Rubin, 1985). The results of the matching process are discussed in section 5.1 below.

4.5. Variables and analysis

A single data file with matched pairs of participating and non-participating cases combined into a single line of data was created with the four following outcomes of interest:

- *Time in out-of-home Placement* was derived from the Iowa SACWIS data set by calculating the number of days from the "Foster Care Removal Start Date" to the "Foster Care Removal End Date."
- *Reunification* was based on the Iowa SACWIS data element "Foster Care Discharge Reason." A binary variable was created from "Foster Care Discharge Reason" indicating whether the case was ended by "Return to Home" or another discharge reason. A successful result for the Parent Partner program was defined in this analysis as a return to the parent from which the removal occurred.
- *Subsequent Removal from Home within 12 and 24 Months* were two binary variables based upon whether another "Foster Care Removal Start Date" occurred after the relevant "Foster Care Removal End Date" and, if so, whether the removal occurred at < 12 months or < 24 months. Analysis of subsequent removals includes only those cases in which "Return Home" was the prior foster care discharge location so as to specifically examine how program participation was linked with parents' ability to avoid subsequent child removals. Future removal of a child from a placement other than their biological parents was not a research question of interest in the current study.

Analyses of the outcomes of interest were conducted using IBM SPSS Statistics Version 23.0. Analysis of *Time in out-of-home Placement* of the matched pairs was done using a paired-sample *t*-test to evaluate differences in population means. Analyses of *Reunification* and *Subsequent Removals within 12 and 24 Months* were done using the McNemar χ^2 test. McNemar's is a statistical test used on paired nominal data and is applied when there is a dichotomous condition (e.g., returned home vs. not returned home, subsequent removal vs. no subsequent removal,

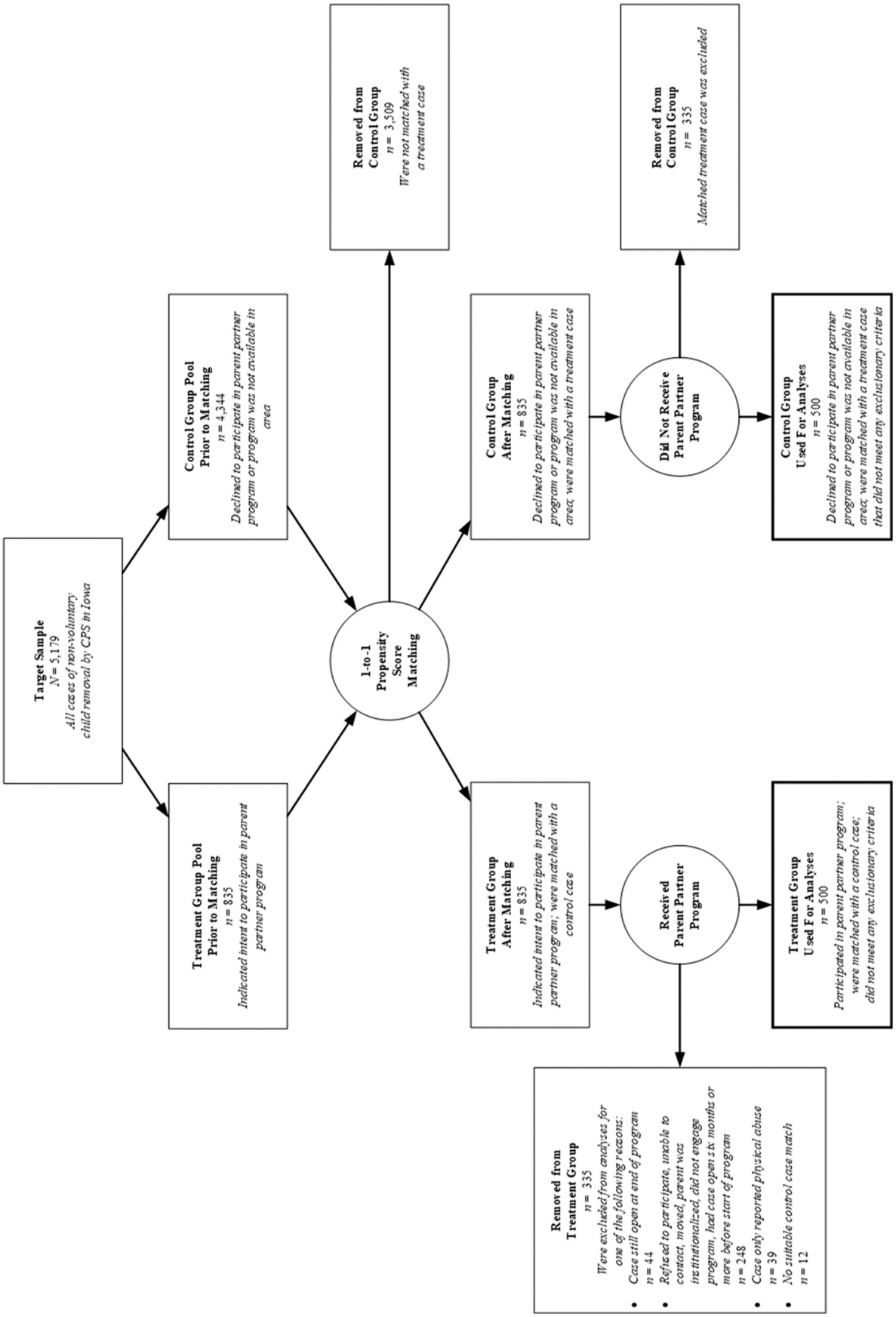

Fig. 1. Flow diagram of treatment and control samples.

Table 1
Comparison of Parent Partner cases to non-participant cases quality of the match on the identified matching factors.

Matching factor	Parent Partner cases $n = 500$	Non-participant matched cases $n = 500$	Non-participant pool $n = 3663$
Child Age (mean)	2.1 years[c]	1.8 years[c]	3.8 years[c]
Child Gender (% male)	49.7%	48.5%	49.6%
Child's Race (% minority)	20.2%[a]	25.7%[a]	19.7%
Child's Race (% white)	79.8%[a]	74.3%[a]	80.3%
Child's Ethnicity (% Hispanic)	9.5%	8.2%[b]	11.7%[b]
Prior Removals (% with at least one)	13.0%	16.0%[b]	12.3%[b]
Reason for Removal includes: Neglect	47.3%	51.5%	50.3%
Reason for Removal includes: Parental Drug Abuse	64.9%[c]	63.2%[c]	55.6%[c]
Reason for Removal includes: Parental Alcohol Abuse	14.6%	16.0%	15.3%
Neglect Findings (% of cases)	90.6%	90.2%	91.0%
Number of DHS Findings (mean)	1.2	1.1	1.2
Polk County Residence	35.9%[c]	35.2%[c]	17.3%[c]

Polk County Iowa is the county with the City of Des Moines and the largest metropolitan area in the state. The highest number of out-of-home placements overall are from Polk County. Matching parent partner cases within Polk County with non-participant cases from Polk County was required to most accurately identify a matching non-participant due to racial/ethnic differences as well as the presence of available parent partners. Use of metropolitan area v. rural area as a matching factor was not as effective in generating as close of matched pairs as was utilizing Polk County v. non Polk County as a matching factor.

[a] Significant difference between Parent Partner cases and Non-Participant Matched cases.
[b] Significant difference between Non-Participant Match cases and Non-Participant Pool.
[c] Significant difference between Matched cases (Parent Partner and Non-Participant) with Non-Participant Pool.

etc.) with matched pairs of subjects. The alpha level used for all statistical tests in this study is $p < .05$.

5. Results

5.1. Matching

Results of the matched-pair process using PSM are presented in Table 1, including each of the matching factors used, the descriptive statistic on each factor for the parent partner cases, the matched non-parent partner cases, and the comparison to the overall pool of non-parent partner cases from which the non-parent partner matched pairs were identified.

The resulting paired matches of participating and non-participating families were not statistically dissimilar across the matched factors with the exception of child minority status. For several factors the matched participating and non-participating cases were more similar to each other than the overall pool from which non-participant cases are drawn, including *Child's Age*, *Reason for Removal includes Parental Drug Abuse*, and *Polk County Residence*. These factors likely reflect meaningful differences in the families and cases that are served by the Parent Partner program in contrast to the universe of Iowa DHS cases during this time period in which a removal occurred.

The distribution of participating parent partner families used in this outcome analysis by cohort year (Iowa DHS Investigation Start Year) is presented in Table 2.

Table 2
Parent Partner families by year of investigation start.

	Frequency	Percent
2011	69	13.8%
2012	154	30.8%
2013	166	33.2%
2014	111	22.2%
Total	500	100.0%

5.2. Findings

5.2.1. Research Question 1: Time in out-of-home placement

As shown in Table 3, children with a parent who participated in the Parent Partner program experienced an average of 466 days in out-of-home placement; children of matched non-participants experienced an average of 459 days in out-of-home placement. There was no statistically significant difference in the number of days in out-of-home placement when comparing the children of parent partners with the children of non-participants; $t\ (499) = 0.549$, $p = .58$. Thus, our first hypothesis was not supported by the data.

Table 3
Comparison of Parent Partner cases to non-participant cases on number of days in out-of-home placement.

	Mean	n	Standard deviation
Parent Partner Children	466.3 days	500	206.4 days
Non-Parent Partner Children	458.7 days	500	239.2 days

5.2.2. Research Question 2: Reunification with the parent

Children with a parent who participated in the Parent Partner program were discharged from foster care to "return home" 62.4% of the time. Matched children with a parent who did not participate in the Parent Partner program were discharged from foster care to "return home" 55.8% of the time. Table 4 summarizes these results.

The percentage of children reunified with their parent differed by parent partner program participation, McNemar $\chi^2\ (1, N = 500) = 4.39, p = .036$. The children of parent partner program participants were significantly more likely to return home at discharge from their foster care placement than the children of matched non-participants. Thus, our second hypothesis was supported by the data.

5.2.3. Research Question 3a: Subsequent removal from home within 12 months

The analysis of subsequent removal from the home includes only those children who met the following criteria: both the parent partner case and the matched non-parent partner case were closed by DHS and

Table 4
Comparison of Parent Partner cases to non-participant cases on number and percentage of discharged children who returned home.

	Returned home		Other discharge type	
	Number	Percentage	Number	Percentage
Parent Partner Children	312	62.4%	188	37.6%
Non-Parent Partner Children	279	55.8%	221	44.2%

Note. $n = 500$ for Each Group.

Table 5
Comparison of Parent Partner cases to non-participant cases on number and percentage of reunified children who were subsequently removed within 12 months.

	NOT subsequently removed within 12 months		Subsequently removed within 12 months	
	Number	Percentage	Number	Percentage
Parent Partner Children	155	86.6%	24	13.4%
Non-Parent Partner Children	140	78.2%	39	21.8%

n = 179 matched pairs for each group.

reflect a discharge from foster care to "return home." Only 179 of 500 matched pairs met these criteria; this number is reduced from the 500 cases as only those matched pair cases were used in which both the parent partner case and the non-participating matched pair case were returned home.

Children with a parent who participated in the Parent Partner program were subsequently removed within 12 months of returning home 13.4% of the time. Matched children of non-participants were subsequently removed within 12 months of returning home 21.8% of the time (Table 5).

The percentage of children subsequently removed within 12 months of reunification differed by parent partner program participation, McNemar χ^2 (1, N = 179) = 4.00, p = .046. Parent partner program participants were significantly less likely to have a subsequent child removal within 12 months of the child returning home than matched non-participants. Thus, our third hypothesis (regarding the 12 month milestone) was supported by the data.

5.2.4. Research Question 3b: Subsequent removal from home within 24 months

Children of a parent who participated in the Parent Partner program were subsequently removed within 24 months of returning home 17.3% of the time. Children of a parent who did not participate in the Parent Partner program were subsequently removed within 24 months of returning home 24.6% of the time. Table 6 presents this comparison. It should be noted that the subsequent removals within 24 months include those cases in which a subsequent removal occurred within the 12 month time period, (e.g. 75% of subsequent removals from the Parent Partner participating families occurred within 12 months of return home).

The percentage of children subsequently removed within 24 months of returning home did not differ by parent partner program participation, McNemar χ^2 (1, N = 179) = 2.71, p = .099. Parent partner program participants were not significantly less likely to have a subsequent child removal within 24 months of the child returning home than matched non-participants, though this difference approached the level of statistical significance. Thus, our third hypothesis (regarding the 24-month milestone) was not supported by the data.

Table 6
Comparison of Parent Partner cases to non-participant cases on number and percentage of reunified children who were subsequently removed within 24 months.

	NOT subsequently removed within 24 months		Subsequently removed within 24 months	
	Number	Percentage	Number	Percentage
Parent Partner Children	148	82.7%	31	17.3%
Non-Parent Partner Children	135	75.4%	44	24.6%

n = 179 for Each Group.

6. Discussion

The current study aimed to address gaps in research on the efficacy of parent partner programs in achieving child welfare-related outcomes. The results of this study indicated positive and significant results on two of the four hypothesized outcomes; Parent Partner participants experienced a higher percentage of discharges to return home and a lower percentage of subsequent removals within 12 months of foster care discharge. While there was no statistically significant difference in the subsequent removals within 24 months between participants and non-participants, the 7.3% lower rate of removal among the children of Parent Partner participants is similar to the 8.4% lower rate of removal that we found for the 12 months outcome. These findings demonstrated that families who participated in the Iowa Parent Partner program had higher rates of family reunification and lower rates of subsequent child removals than their matched families who did not participate in the program. Our findings align with past studies that have documented the effectiveness of peer-based supports in the substance abuse and mental health fields (Chinman et al., 2014; Davidon et al., 2018; Davidson, 2013; Pfeiffer, Heisler, Piette, Rogers, & Valenstein, 2011) and add to the growing body of literature on the effects of parent partner programs among children and families with child welfare involvement (Berrick et al., 2011; Bohannan et al., 2016; Budde & Schene, 2004; Layzer et al., 2001; Summers et al., 2012; Suter & Bruns, 2009).

6.1. Research question 1: Parent Partner programs and time in out-of-home placement

The results of the current study did not find an impact of the parent partner program on the length of stay in out-of-home placement. One explanation for this finding is that, although parent partners can provide input to the court indirectly through the assigned child welfare worker on these matters, they have minimal influence over judges who are bound by federal regulations and, ultimately, have discretion and decision-making authority in determining when a child returns home (Noonan, Sabel, & Simon, 2009). It should also be noted that substance abuse recovery is often a key variable in the court's determination of a child's length of stay in out-of-home care (Semidei, Radel, & Nolan, 2001). Previous research indicates that parents involved in peer mentoring programs are more engaged in their case plan than similar parents who are not involved in such programs (Bohannan et al., 2016; Summers et al., 2012). Thus, it is possible that judges who are privy to parent partner program involvement and believe that the parent is making positive changes may choose to leave a child in placement for a longer period of time to ensure safety and demonstrate consistency with decisions involving similar non-parent partner cases. Additionally, the lack of an effect on length of stay in out-of-home care should be considered in the broader context of the system of care as other results of this study demonstrate a significant increase in reunification rates and decreased rates of short-term reentry into the system when a parent partner provides support to the family. Future research should examine how specific case details (such as substance abuse as the reason for removal) and court dynamics impact the effects of parent partner involvement on case outcomes.

6.2. Research question 2: Parent Partner programs and reunification rates

The results of the current study demonstrate that children of Iowa Parent Partner Program participants were significantly more likely to return home at discharge from their foster care placement than were children of matched non-participants. These results align with previous findings that parent partner program participants achieve higher

reunification rates than do participants who do not participate (Berrick et al., 2011; Bohannan et al., 2016). Past research suggests that parents may experience a greater sense of motivation when exposed to others who have successfully navigated the system, and this motivation may contribute to a faster reunification (Young & Gardner, 2002). A key component to the success of these types of support models is the shared experiences between parent partners and program participants. Berrick et al. (2011) note a distinct "social distance" between child welfare workers and birth parents that can make interactions feel adversarial. These tensions can result in parents feeling like there is no one who truly understands them or who is really on their side, which can compromise their level of engagement in services and, thus, their likelihood of successful reunification. Having these shared experiences allows parent partners to provide a different perspective from the professional approach, which is often directive and focused on intervention compliance, and can serve to engage parents more effectively in their recovery process. The majority of parents who have had their children removed by the child protection system face a variety of challenges, including substance abuse, mental health problems, and domestic violence (Semidei et al., 2001), which many parent partners have personally overcome. Cohen and Canan (2006) suggest that "the individual's perception that the helper has had similar experiences allows the helper's suggestions and behavior to become more acceptable to the individual than those of others - such as child welfare professionals - who may be perceived as different in experiences, situation, social status, or authority role" (p. 875). Other scholars echo the benefits of parent partners being able to engage with families in a more informal manner (Anthony, Berrick, Cohen, & Wilder, 2009) and with a mutual understanding about shared experiences in the child welfare system (Ireys, Devet, & Sawka, 2002; Leake et al., 2012). The focus of this peer support is to build resilience, overcome barriers to reunification, and promote a healthy and nurturing environment for children and families. Many of these families have a multitude of complex issues to address and, due to federal regulations, substantial behavioral changes need to be made in a relatively short period of time. Future research is needed to examine how working with families on a longer term basis to create valuable and trusting relationships (such as through extending the program to allow for peer mentoring services beyond case closure) may contribute to an overall increase in successful reunifications.

6.3. Research questions 3a & 3b: Parent Partner programs and subsequent removals

The results of the current study indicate that participants in the Iowa Parent Partner program were significantly less likely to have a subsequent child removal within 12 months of the child returning home compared to matched non-participants, but this same effect was not found within 24 months of the child returning home. This suggests that the program may have short term impacts on the reentry into the system but that these impacts are not fully sustained in the long term. Substance use recovery timelines may provide one possible explanation for these findings as recent data from the Adoption and Foster Care Analysis and Reporting System (AFCARS) indicates that 36% of the children who were removed from their home in the 2017 fiscal year - approximately 96,700 children - were removed because at least one parent had a substance abuse issue (Children's Bureau, 2017). Moreover, parents who struggle with substance abuse and dependence are at an increased risk of having their children re-enter the child welfare system (Ryan, Victor, Moore, Mowbray, & Perron, 2016). It is often the case that once the initial success of reunification is achieved and the case is closed, the services that had yielded these outcomes (e.g. drug treatment, parenting classes, peer support programs, etc.) are discontinued. This may put children at increased risk for future out-of-home placement because the road to long-term recovery is not linear; in fact, the recovery process is arduous and often involves relapse (Bosk, Van Alst, & Van Scoyoc, 2017). Additionally, mental health issues often co-occur with substance abuse (National Institute on Drug Abuse, 2018), which could result in similar setbacks around maintaining stability and addressing risk and safety concerns, increasing the need for an out-of-home placement. Future research should explore how case complexities such as parental substance abuse and mental health issues impact recidivism and the resulting reentry of children into the system. Future research should also evaluate peer mentoring programs that allow parent partners to remain with the family after the case is closed. It is possible that by increasing the length of parent partner support provision, families dealing with substance use and/or mental health issues could strengthen their recovery and reduce rates of reentry for longer periods of time.

6.4. Limitations

The findings of this study provide supportive evidence of the impact of the Iowa Parent Partner program, though there are some limitations to the current study including non-random assignment and lack of statewide implementation in some years of data collection. First, random assignment of Parent Partner participants was not feasible, necessitating a quasi-experimental design. According to Luellen et al. (2005), the major disadvantage to using quasi-experimental designs is that key differences between the participant and participant groups that existed during the selection process can be misinterpreted as treatment effects (p. 531). To mitigate the risk of detecting selection effects and incorrectly interpreting them as treatment effects, propensity score matching was used in this study to closely simulate a true experimental model in which participation in the intervention is determined by random assignment. The success of this method is highly dependent upon the accurate selection of factors that potentially influence both the outcomes themselves and the individual's decision to participate in a voluntary program (Smith & Todd, 2003). To the extent that the factors that influenced a parent's choice to participate in the Parent Partner program are reflected in the matching factors, there is a higher level of confidence in the results. Other threats to validity of the current findings include that the differences found between treatment and control groups are related to the choice to participate and engage in the Parent Partner program and/or that the differences found are related to unobserved factors that influence the outcomes (see Dehejia & Wahba, 1999). Although PSM produces equivalent comparison groups on the observed factors, an experimental design with random selection would produce equivalent groups on both observed and unobserved factors. While the current findings are grounded in a unique sample and are consistent with emerging evidence on the effectiveness of parent partner programs, some caution is advised when interpreting the results until future studies that utilize randomized designs are conducted.

It should also be noted that during the course of the study period different parts of the state were in various stages of implementing the Parent Partner Program; thus, some areas had several years of program implementation experience while other areas of the state had begun implementation more recently. Our analyses included data from 2011 when the program was not yet fully statewide in coverage through the transition of the Parent Partner program to a statewide contracted implementation in 2013 and beyond. This variability in implementation also has implications for our decision to exclude cases that were still open ($n = 44$; 5.27% of eligible treatment group after matching); these exclusions were made to ensure our data matched the federal guidelines for reunification milestones (i.e., 12 and 24 months). It is important to note that due to the various stages of Parent Partner Program implementation throughout the state while evaluation work was being conducted, the current analyses inevitably included parents who were substantively similar to those who did not finish the program by the end of the evaluation period and were excluded from analyses ($n = 44$). Potential variations in implementation fidelity in different parts of the state and over time may also have contributed to variations in the effectiveness of the Parent Partner program. Case-level data on

differences in service provision, program fidelity, and parental engagement in all facets of programming were not included in this study. While the fidelity measures used by the agency did indicate high levels of fidelity, these measures were preliminary. Future studies should examine these child outcomes in relation to program fidelity as fidelity is a key element in being able to identify a program as evidence-informed and evidenced-based (Aarons, Sommerfeld, Hecht, Silovsky, & Chaffin, 2009; Polinsky et al., 2013). Additionally, studies should carefully examine how differences in service provision and parental engagement influence treatment outcomes. Finally, due to the nature of the evaluation design that was driven by 1) the funding agency's needs and 2) the programmatic and practical limitations of a state level evaluation effort, we were unable to examine the effects of other potentially influential variables on program outcomes. We encourage future researchers to examine the effects that family structure, parental willingness to participate in peer mentoring programs, and other important factors have on parent partner program outcomes.

In light of the limitations of the current study, several unique study strengths bear mentioning. First, the current study utilized a large sample of state-level data. Few studies are able to secure a sample of child welfare-involved families of this size. Second, the treatment group was compared to a control sample that was created via propensity score matching. Despite this method being less rigorous than a randomized controlled trial (which was not possible for this study due to agency ethical concerns), treatment findings based on matched samples are much more reliable than lesser methods of detecting treatment effects (e.g., simply comparing treatment recipients to treatment non-recipients; Guo & Fraser, 2010; Rosenbaum & Rubin, 1985). Lastly, the current results add to a rather limited area of research. Much more research is needed to understand the effects of parent partner programs and the mechanisms through which effects are achieved, and these results serve as a starting point for future studies and prompt additional research questions that need answering.

6.5. Conclusion

This study of the Iowa Parent Partner program provides preliminary evidence that these types of peer-mentoring programs can increase the chance of family reunification and decrease the likelihood of foster care re-entry. The findings suggest that – when parent partners support program participants in making authentic and positive life changes – successful reunification becomes more easily achieved. If treatment impacts can be sustained, instances of recidivism that result in a child's reentry into the system should respectively decrease. When subsequent reports do occur, we anticipate that the improved condition of the family environment could shorten the child's length of stay in their out-of-home placement. We also anticipate that parents who encounter challenges following their experience with a peer-based model of support will be more likely to utilize healthy avenues of both formal and informal supports to overcome challenges. We recommend that future studies rigorously evaluate parent partner programs, ideally using an experimental design in which families are randomly assigned to receive these services, and examine potential treatment mechanisms. Additionally, an emphasis on fidelity monitoring and sustained practice effects will be essential in continuing to establish parent partner programs as an evidence-based practice in child welfare (Overview of the CEBC Scientific Rating Scale, 2016). Finally, future research should examine the impacts of case complexities, such as parental substance use and mental health issues, on parent partner program outcomes. In addition to the growing evidentiary support for parent partner programs, agencies considering the implementation of a parent partner program should make use of available resources on funding models, recruitment strategies, policy guidelines, and common challenges with implementation (Capacity Building Center for States, 2016; Cohen & Canan, 2006; Leake et al., 2012; Marcenko et al., 2010).

Funding

This work was made possible in part through HHS/ACF/ACYF/Children's Bureau cooperative agreement #90CO1043 to the University of Nebraska-Lincoln for the Midwest Child Welfare Implementation Center, and through a contract for program evaluation services from the Iowa Department of Human Services to the University of Nebraska-Lincoln. One of the co-authors of this manuscript is the Community Partnership State Manager for the Iowa Parent Partner program.

Acknowledgements

The authors wish to acknowledge the assistance of Mark Cooper, Sara Persons, Lori Hoetcher, J.D. PhD., Joe Pastuszak, M.A., and Hannah Dietrich, Ph.D.

References

Aarons, G. A., Sommerfeld, D. H., Hecht, D. B., Silovsky, J. F., & Chaffin, M. J. (2009). The impact of evidence-based practice implementation and fidelity monitoring on staff turnover: Evidence for a protective effect. *Journal of Consulting and Clinical Psychology, 77*(2), 270–280. https://doi.org/10.1037/a0013223.

Anderson, D. G. (2000). Coping strategies and burnout among veteran child protection workers. *Child Abuse & Neglect, 24*(6), 839–848. https://doi.org/10.1016/S0145-2134(00)00143-5.

Anthony, E. K., Berrick, J. D., Cohen, E., & Wilder, E. (2009). *Partnering with parents: Promising approaches to improve reunification outcomes for children in foster care.* Berkeley, CA: University of California at Berkeley, School of Social Welfare, Center for Social Services Research.

Berrick, J. D., Cohen, E., & Anthony, E. (2011). Partnering with parents: Promising approaches to improve reunification outcomes for children in foster care. *Journal of Family Strengths, 11*(1), 1–13. Retrieved on December 18, 2018 from https://digitalcommons.library.tmc.edu/jfs/vol11/iss1/14.

Bohannan, T., Gonzalez, C., & Summers, A. (2016). Assessing the relationship between a peer-mentoring program and case outcomes in dependency court. *Journal of Public Child Welfare, 10*, 176–196. https://doi.org/10.1080/15548732.2016.1155523.

Bosk, E. A., Van Alst, D., & Van Scoyoc, A. V. (2017). A chronic problem: Competing paradigms for substance abuse in child welfare policy and practice and the need for new approaches. *British Journal of Social Work, 47*, 1669–1685. https://doi.org/10.1093/bjsw/bcx095.

Brand, J. E., & Halaby, C. N. (2006). Regression and matching estimates of the effects of elite college attendance on educational and career achievement. *Social Science Research, 35*(3), 749–770. https://doi.org/10.1016/j.ssresearch.2005.06.006.

Budde, S., & Schene, P. (2004). Informal social support interventions and their role in violence prevention. *Journal of Interpersonal Violence, 19*, 341–355. https://doi.org/10.1177/0886260503261157.

Caliendo, M., & Kopeinig, S. (2008). Some practical guidance for the implementation of propensity score matching. *Journal of Economic Surveys, 22*(1), 31–72. https://doi.org/10.1111/j.1467-6419.2007.00527.x.

Capacity Building Center for States (2016). *Parent partner program navigator: Designing and implementing parent partner programs in child welfare.* Washington, DC: Children's Bureau, Administration for Children and Families, U.S. Department of Health and Human Services.

Center for Social Services Research (2004). *Title IV-E child welfare waiver demonstration project, intensive services: Final report.* Berkeley, CA: University of California at Berkeley, School of Social Welfare May 31.

Chaffin, M., Bonner, B. L., & Hill, R. F. (2001). Family preservation and family support programs: Child maltreatment outcomes across client risk levels and program types. *Child Abuse and Neglect, 25*, 1269–1289. https://doi.org/10.1016/S0145-2134(01)00275-7.

Children's Bureau (2016). Child Maltreatment Report. Retrieved on December 18, 2018 from https://www.acf.hhs.gov/cb/resource/child-maltreatment-2016.

Children's Bureau (2017). Adoption and Foster Care Analysis and Reporting System (AFCARS) Report (report no. 24). Retrieved on December 18, 2018 from https://www.acf.hhs.gov/cb/resource/afcars-report-24.

Chinman, M., George, P., Dougherty, R. H., Daniels, A. S., Ghose, S. S., Swift, A., et al. (2014). Peer support services for individuals with serious mental illnesses: Assessing the evidence. *Psychiatric Services (Washington, D. C.), 65*(4), 429–441. https://doi.org/10.1176/appi.ps.201300244.

Cohen, E., & Canan, L. (2006). Closer to home: Parent mentors in child welfare. *Child Welfare League of America, 85*(5), 867–884.

D'Agostino, R. B., Jr. (1998). Propensity score methods for bias reduction in the comparison of a treatment to a non-randomized control group. *Statistics in Medicine, 17*, 2265–2281. https://doi.org/10.1002/(SICI)1097-0258(19981015)17:19<2265::AID-SIM918>3.0.CO;2-B.

D'Andrade, A. C. (2015). Parents and court-ordered services: A descriptive study of service use in child welfare reunification. *Families in Society, 96*(1), 25–34. https://doi.org/10.1606/1044-3894.2015.96.5.

Davidon, L., Bellamy, C., Chinman, M., Farkas, M., Ostrow, L., Cook, J. A., ... Salzer, M. (2018). Revisiting the rationale and evidence for peer support. *Community Psychiatry,*

35(6), 11–12.
Davidson, L. (2013). Peer support: Coming of age of and/or miles to go before we sleep? An introduction. *Journal of Behavioral Health Services & Research, 42*(1), 96–99. https://doi.org/10.1007/s11414-013-9379-2.
Dehejia, R. H. (2005). Practical propensity score matching: A reply to Smith and Todd. *Journal of Econometrics, 125*, 355–364. https://doi.org/10.1016/j.jeconom.2004.04.012.
Dehejia, R. H., & Wahba, S. (1999). Causal effects in nonexperimental studies: Reevaluating the evaluation of training programs. *Journal of the American Statistical Association, 94*, 1053–1062. https://doi.org/10.1080/01621459.1999.10473858.
Dehejia, R. H., & Wahba, S. (2002). Propensity score-matching methods for nonexperimental causal studies. *The Review of Economics and Statistics, 84*(1), 151–161. https://doi.org/10.1162/003465302317331982.
Falk, D. S. (2015). Alumni of a BSW-level specialized title IV-E program voice their experiences in the workplace. *Journal of Social Work Education, 51*, S173–S194. https://doi.org/10.1080/10437797.2015.1072410.
Family First Prevention Services Act § 50711, 50721-50723, 50731-50733 (2018). Retrieved December 18, 2018, from https://www.childrensdefense.org/wp-content/uploads/2018/08/family-first-detailed-summary.pdf.
Frame, L., Berrick, J. D., & Knittel, J. (2010, Spring). Parent mentors in child welfare: A paradigm shift from traditional services. *The Source, 20*(1), 2–6.
Frame, L., Conley, A., & Berrick, J. D. (2006). "The real work is what they do together": Peer support and birth parent change. *Families in Society, 87*, 507–520.
Frolich, M. (2004). Finite-sample properties of propensity-score matching and weighting estimators. *Review of Economics and Statistics, 86*(1), 77–90. https://doi.org/10.1162/003465304323023697.
Government Accountability Office (GAO) (2003). Child welfare: HHS could play a greater role in helping child welfare agencies recruit and retain staff [GAO-03-357]. Washington DC: Author. Retrieved on December 18, 2018, from https://www.gao.gov/products/GAO-03-357
Guo, S., Barth, R. P., & Gibbons, C. (2006). Propensity score matching strategies for evaluating substance abuse services for child welfare clients. *Children and Youth Services Review, 28*, 357–383. https://doi.org/10.1016/j.childyouth.2005.04.012.
Guo, S., & Fraser, M. W. (2010). Propensity score analysis: Statistical methods and applications. *Psychometrika, 75*(4), 775–777.
Heckman, J., Ichimura, H., Smith, J., & Todd, P. (1996). Sources of selection bias in evaluating social programs: An interpretation of conventional measures and evidence on the effectiveness of matching as a program evaluation method. *Proceedings of the National Academy of Sciences, 93*(23), 13416–13420. https://doi.org/10.1073/pnas.93.23.13416.
Heckman, J., Ichimura, H., Smith, J., & Todd, P. (1998). Characterizing selection bias using experimental data. *Econometrica, 66*(5), 1017–1098. https://doi.org/10.3386/w6699.
Heckman, J., Ichimura, H., & Todd, P. (1997). Matching as an econometric evaluation estimator: Evidence from evaluating a job training programme. *Review of Economic Studies, 64*(4), 605–654. https://doi.org/10.2307/2971733.
Heckman, J., Ichimura, H., & Todd, P. (1998). Matching as an econometric evaluation estimator. *Review of Economic Studies, 65*(2), 261–294. https://doi.org/10.1111/1467-937X.00044.
Iowa Department of Human Services (2018). *Iowa Parent Partner Approach handbook: Governing philosophy, policy, & protocol*.
Ireys, H. T., Devet, K. A., & Sawka, D. (2002). Family support and education. In B. J. Burns, & K. Hoagwood (Eds.). *Community treatment for youth: Evidence-based interventions for severe emotional and behavioral disorders* (pp. 154–175). New York: Oxford University Press.
Koh, E., & Testa, M. F. (2008). Propensity score matching of children in kinship and nonkinship foster care: Do permanency outcomes still differ? *Social Work Research, 32*(2), 105–116. https://doi.org/10.1093/swr/32.2.105.
LaLonde, R. (1986). Evaluating the econometric evaluations of training programs with experimental data. *American Economic Review, 76*(4), 604–620.
Layzer, J. I., Goodson, B. D., Bernstein, L., & Price, C. (2001). *National evaluation of family support programs: Final report, volume a: The meta-analysis.* Cambridge, MA: Abt Associates.
Leake, R., Longworth-Reed, L., Williams, N., & Potter, C. (2012). Exploring the benefits of a parent partner mentoring program in child welfare. *Journal of Family Strengths, 12*(1), 1–24. https://digitalcommons.library.tmc.edu/jfs/vol12/iss1/6.
Lothridge, J., McCroskey, J., Pecora, P. J., Chambers, R., & Fatemi, M. (2012). Strategies for improving child welfare services for families of color: First findings of a community-based initiative in Los Angeles. *Children and Youth Services Review, 34*, 281–288. https://doi.org/10.1016/j.childyouth.2011.10.025.
Luellen, J. K., Shadish, W. R., & Clark, M. H. (2005). Propensity scores: An introduction and experimental test. *Evaluation Review, 29*(6), 530–558. https://doi.org/10.1177/0193841X05275596.
Marcenko, M., Brown, R., DeVoy, P. R., & Conway, D. (2010). Engaging parents: Innovative approaches in child welfare. *Protecting Children, 25*(1), 23–34. Retrieved December 18, 2018 from http://centerforchildwelfare.org/kb/bppub/engaging-parents-innovative.pdf.
Mor Barak, M. E., Nissly, J. A., & Levin, A. (2001). Antecedents to retention and turnover among child welfare, social work, and other human services employees: What can we learn from past research? A review and meta-analysis. *Social Service Review, 75*, 625–661. https://doi.org/10.1086/323166.
Morris, S. Z., & Gibson, C. L. (2011). Corporal punishment's influence on children's aggressive and delinquent behavior. *Criminal Justice and Behavior, 38*, 818–839. https://doi.org/10.1177/0093854811406070.
National Institute on Drug Abuse (2018). *Common comorbidities with substance use disorders.* 4–22. Retrieved on May 10, 2019 from https://www.drugabuse.gov/publications/research-reports/common-comorbidities-substance-use-disorders/part-1-connection-between-substance-use-disorders-mental-illness.
Needell, B., Webster, D., Armijo, M., Lee, S., Dawson, W., Magruder, J., & Holmes, A. (2009). Child welfare services reports for California. *University of California at Berkeley*Center for: Social Services Research. Retrieved December 18, 2018, from http://cssr.berkeley.edu/ucb_childwelfare/Entries.aspx.
Nilsen, W. J., Affronti, M. L., & Coombes, M. L. (2009). Veteran parents in child protective services: Theory and implementation. *Family Relations, 58*, 520–535. https://doi.org/10.1111/j.1741-3729.2009.00572.x.
Noonan, K. G., Sabel, C. F., & Simon, W. H. (2009). Legal accountability in the service-based welfare state: Lessons from child welfare reform. *Law & Social Inquiry, 34*(3), 523–568. https://doi.org/10.1111/j.1747-4469.2009.01157.x.
Oates, T., Lint, S., Persons, S., Reinburn, J. (Presenters). (2016). Child Information Gateway Podcast – Developing and sustaining a parent partner program [Audio podcast]. Retrieved December 18, 2018, from https://www.acf.hhs.gov/cb/resource/child-welfare-podcast-parent-partner
Overview of the CEBC scientific rating scale (2016). Retrieved December 18, 2018, from http://www.cebc4cw.org/ratings/scientific-rating-scale/.
Padgett, R. D., Salisbury, M. H., An, B. P., & Pascarella, E. T. (2010). Required, practical or unnecessary? An examination and demonstration of propensity score matching using longitudinal secondary data. *Assessment Supplement, (Winter),* 29–42. https://doi.org/10.1002/ir.370.
Pfeiffer, P. N., Heisler, M., Piette, J. D., Rogers, M. A. M., & Valenstein, M. (2011). Efficacy of peer support interventions for depression: A meta-analysis. *General Hospital Psychiatry, 33*(1), 29–36. https://doi.org/10.1016/j.genhosppsych.2010.10.002.
Polinsky, M. L., Levine, M. H., Pion-Berlin, L., Torres, A., & Garibay, J. (2013). Development and validation of a Wraparound parent partner fidelity tool. *Social Work Research, 37*(2), 111–120. https://doi.org/10.1093/swr/svt014.
Reich, J. A. (2005). *Fixing families: Parents, power and the child welfare system.* New York: Routledge, Taylor & Francis.
Reynolds, C. L., & DesJardins, S. L. (2009). The use of matching methods in higher education research: Answering whether attendance at a 2-year institution results in differences in educational attainment. In J. C. Smart (Ed.). *Higher education: Handbook of theory and research*. New York: Springer Science + Business Media.
Rosenbaum, P., & Rubin, D. (1985). Constructing a control group using multivariate matched sampling methods that incorporate the propensity. *American Statistician, 39*(1), 33–38.
Rosenbaum, P. R., & Rubin, D. B. (1983). The central role of the propensity score in observational studies for causal effects. *Biometrika, 70*, 41–55. https://doi.org/10.1093/biomet/70.1.41.
Rubin, D. (1979). Using multivariate matched sampling and regression adjustment to control bias in observational studies. *Journal of the American Statistical Association, 74*(366), 318–328. https://doi.org/10.1080/01621459.1979.10482513.
Ryan, J. P., Victor, B. G., Moore, A., Mowbray, O., & Perron, B. E. (2016). Recovery coaches and the stability of reunification for substance abusing families in child welfare. *Children and Youth Services Review, 70*, 357–363. https://doi.org/10.1016/j.childyouth.2016.10.002.
Semidei, J., Radel, L. F., & Nolan, C. (2001). Substance abuse and child welfare: Clear linkages and promising responses. *Child Welfare League of America, 80*(2), 109–128.
Shadish, W. R., Cook, T., & Campbell, D. T. (2002). *Experimental and quasi-experimental designs for generalized causal inference.* Boston: Houghton-Mifflin.
Shaw, T. V. (2006). Re-entry into the foster care system after reunification. *Children and Youth Services Review, 28*(11), 1375–1390. https://doi.org/10.1016/j.childyouth.2006.02.006.
Smith, J., & Todd, P. (2003). *Does Matching Overcome Lalonde's Critique of Nonexperimental Estimators? CIBC Centre for Human Capital and Productivity. CIBC Working Papers, 2003-5.* London, ON: Department of Economics, University of Western Ontariohttps://doi.org/10.1016/j.jeconom.2004.04.011.
Stuart, E. A., & Rubin, D. B. (2007). Best practices in quasi-experimental designs: Matching methods for causal inference. In J. Osborne's (Ed.). *Best practices in quantitative social science* (pp. 155–176). Thousand Oaks, CA: Sage Publications.
Summers, A., Wood, S. M., Russell, J. R., & Macgill, S. O. (2012). An evaluation of the effectiveness of a parent-to-parent program in changing attitudes and increasing parental engagement in the juvenile dependency system. *Children and Youth Services Review, 34*(10), 2036–2041. https://doi.org/10.1016/j.childyouth.2012.06.016.
Suter, J. C., & Bruns, E. J. (2009). Effectiveness of the wraparound process for children with emotional and behavioral disorders: A meta-analysis. *Clinical Child and Family Psychology Review, 12*, 336–351. https://doi.org/10.1007/s10567-009-0059-y.
Thoemmes, F. J., & Kim, E. S. (2011). A systematic review of propensity score methods in the social sciences. *Multivariate Behavioral Research, 46*(1), 90–118. https://doi.org/10.1080/00273171.2011.540475.
Thoits, P. A. (2006). Personal agency in the stress process. *Journal of Health and Social Behavior, 47*, 309–323. https://doi.org/10.1177/002214650604700401.
Titus, M. A. (2007). Detecting selection bias, using propensity score matching, and estimating treatment effects: An application to the private returns to a master's degree.

Research in Higher Education, 48(4), 487–521. https://doi.org/10.1007/s11162-006-9034-3.

U.S. Department of Health and Human Services (2000). *Rethinking child welfare practice under the adoption and safe families act of 1997: A resource guide.* Washington, DC: U.S. Government Printing Office.

Victor, B. G., Ryan, J. P., Moore, A., Mowbray, O., Evangelist, M., & Perron, B. E. (2016). Foster home licensing and risk of reentry to out-of-home care following family reunification. *Children and Youth Services Review, 70*, 112–119. https://doi.org/10.1016/j.childyouth.2016.09.015.

Weigensberg, E. C., Barth, R. P., & Guo, S. (2009). Family group decision making: A propensity score analysis to evaluate child and family services at baseline and after 36 months. *Children and Youth Services Review, 31*(3), 383–390. https://doi.org/10.1016/j.childyouth.2008.09.001.

Wells, M., & Correia, M. (2012). Reentry into out-of-home care: Implications of child welfare workers' assessments of risk and safety. *Social Work Research, 36*(3), 181–195. https://doi.org/10.1093/swr/svs011.

Williamson, E., & Gray, A. (2011). New roles for families in child welfare: Strategies for expanding family involvement beyond the case level. *Children and Youth Services Review, 33*, 1212–1216. https://doi.org/10.1016/j.childyouth.2011.02.013.

Wulczyn, F. (2004). Family reunification. *The Future of Children, 14*(1), 95–113. https://doi.org/10.2307/1602756.

Young, N., & Gardner, S. (2002). *Navigating the pathways: lessons and promising practices in linking alcohol and drug services with child welfare.* Rockville, MD: US Department of Health and Human Services.