



Research article

Identifying families with complex needs after an initial child abuse investigation: A comparison of demographics and needs related to domestic violence, mental health, and substance use



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ARTICLE INFO

Article history:

Received 30 September 2016
 Received in revised form 1 March 2017
 Accepted 3 March 2017
 Available online 19 March 2017

Keywords:

Home-based postinvestigation services
 Family assessment
 CPS decision-making
 Complex needs (AKA domestic violence,
 mental health, substance use)
 Child maltreatment
 Differential response/alternative response

ABSTRACT

Families with complex needs related to domestic violence, mental health, and substance use have some of the worst child protective services (CPS) outcomes. Although many of these families are identified during a CPS investigation and subsequently referred to home-based postinvestigation services (HBPS), many are re-reported to CPS, so it is important to understand the postinvestigation experiences of this vulnerable group. Therefore, this study compared families with and without complex needs to understand their unique demographics, needs, and postinvestigation outcomes.

The sample consisted of 2008 caregivers who received HBPS following an initial CPS investigation. The Family Assessment Form (FAF) was used to measure family functioning in eight domains using a 1–5 scale with higher ratings representing worse functioning. Complex needs were indicated by a mean FAF score of 3 or higher for either domestic violence, mental health, or substance use. Using Pearson chi-square analyses and two-sample *t*-tests, comparisons were made between families with ($n = 836$) and without ($n = 1172$) complex needs. Half of caregivers with complex needs had a history of abuse, 25% had three to five needs, and nearly half had six to eight needs; 90% of caregivers without complex needs had zero to two needs. Furthermore, caregivers with complex needs had higher mean scores for concrete, educational, and clinical needs. These findings highlight the importance of recognizing variation among families referred to HBPS and accurate screening to ensure that families with complex needs are offered and receive services matched to their unique characteristics and needs.

Published by Elsevier Ltd.

1. Introduction

In 2015, child protective service (CPS) agencies in the United States investigated than 3.4 million children due to suspected child abuse and neglect. Approximately one third of these children and their families were referred for home-based postinvestigation services (HBPS) after the conclusion of the investigation (U.S. Department of Health and Human Services [USDHHS], 2017). CPS agencies typically refer families to HBPS when an investigation determines that children are safe enough to remain at home, but there exists some level of risk of future maltreatment. Assessing risk of child abuse and

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determining how best to engage at-risk families continue to challenge CPS agencies and service providers (López, Fluke, Benbenishty, & Knorth, 2015). Yet doing so effectively and efficiently is critical, particularly for families referred to HBPS considering that CPS no longer follows these families once their investigation closes.

Presumably, families referred to HBPS are at lower risk of maltreatment because their CPS report did not meet state statutes to open a CPS case. However, a growing body of literature suggests that any CPS report is an indicator of increased vulnerability and risk of future maltreatment (Dumas, Elzinga-Marshall, Monahan, van Buren, & Will, 2015; Putnam-Hornstein, Simon, Eastman, & Magruder, 2014). Furthermore, results of a growing body of empirical studies comparing families with substantiated and unfounded or inconclusive CPS reports (i.e., no or little evidence of abuse or neglect) suggest that families reported to CPS have similar needs for services regardless of the decision to open a case and provide mandated services (Casanueva, Dolan, Smith, & Ringeisen, 2012; Drake, Jonson-Reid, Way, & Chung, 2003; Drake, 1996; Kohl, Jonson-Reid, & Drake, 2009; National Survey of Child & Adolescent Well-Being, 2007; Wolock, Sherman, Feldman, & Metzger, 2001). Studies also have indicated that families with “complex needs” related to mental health, substance abuse, and domestic violence have the worst outcomes of families investigated by CPS agencies (Barth, 2009; Casanueva et al., 2015; Fluke, Shusterman, Hollinshead, & Yuan, 2008; Jonson-Reid, Emery, Drake, & Stahlschmidt, 2010). However, less is known about the nature of the needs of these families or the services they receive to prevent child maltreatment because these families are not followed by CPS once the investigation closes. Findings from studies that examined the relationship between complex needs and receipt of HBPS do suggest, however, that services may not always align with family needs (Bagdasaryan, 2005; Cash & Berry, 2002; Chambers & Potter, 2008; Choi & Ryan, 2007; Simon & Brooks, 2016; Staudt & Cherry, 2009).

Given the dearth of empirical knowledge about families with complex needs that receive HBPS, this study examined demographic characteristics, needs, and use of HBPS following an initial CPS investigation. The study also compared re-referral and other child welfare outcomes among these families with the following specific aims in mind:

- (1) Describe the different demographic characteristics of families with and without complex needs.
- (2) Examine the different types of need and HBPS used following an initial investigation by CPS.
- (3) Compare the outcomes of families with and without complex needs related to domestic violence, substance abuse, and mental health.

2. Complex needs and child maltreatment

The most common reasons for CPS involvement include domestic violence, mental health, and substance abuse (Barth, 2009; Child Welfare Information Gateway [CWIG], 2014a, 2014b; Marcenko et al., 2011; Marcenko, Lyons, & Courtney, 2011; McCoy & Keen, 2009). Numerous studies have found a link between domestic violence and child maltreatment (Barth, 2009; Casanueva et al., 2015; Hamby, Finkelhor, Turner, & Ormrod, 2010; Jouriles, McDonald, Smith Slep, Heyman, & Garrido, 2008; Osofsky, 2003). Caregivers in relationships involving domestic violence may become violent with their own children (Jouriles et al., 2008; Taylor, Guterman, Lee, & Rathouz, 2009). National estimates indicate that nearly 30% of child victims have been exposed to domestic violence in their home (CWIG, 2014a, 2014b; USDHHS, 2017), and the presence of domestic violence is associated with an increased likelihood of CPS recidivism (Casanueva, Martin, & Runyan, 2009; Casanueva et al., 2015).

Need related to mental health is another significant reason for CPS involvement (Barth, 2009; Burns et al., 2010). Findings from a 2014 national survey indicated that an estimated 43.8 million adults, nearly 1 in 5 adults, had a mental illness during the previous year (Hedden et al., 2015). For caregivers and parents involved with CPS, national estimates underscore a high prevalence of mental health need that is worse than general population estimates (Burgess & Borowsky, 2010; Burns et al., 2010; Chuang, Wells, Bellettiere, & Cross, 2013; Dolan, Casanueva, Smith, & Ringeisen, 2012). The presence of mental health problems negatively affects parenting ability (Barth, 2009; Smith, 2004). For example, parents with depression may be less available to and communicative with their children and struggle to maintain a healthy interaction (Barth, 2009; Smith, 2004). Furthermore, caregivers with mental health problems are more likely to be re-reported to CPS (Casanueva et al., 2015; Dakil, Sakai, Lin, & Flores, 2011; Jonson-Reid et al., 2010).

Last, substance abuse is an important risk factor for child maltreatment (Barth, 2009; Brown, Cohen, Johnson, & Salzinger, 1998; CWIG, 2014b; Semidei, Radel, & Nolan, 2001; Traube, 2012; Wulczyn, 2009). Estimates based on national and local studies indicate that between one third and two thirds of families involved in child welfare have a substance abuse problem (Semidei et al., 2001; USDHHS, 1999; Young, Boles, & Otero, 2007). Parents dealing with substance abuse are at high risk of maltreating their children due to numerous reasons including decreased family functioning (Wells, 2009; Wolock et al., 2001), decreased parenting capabilities (Barnard & McKeganey, 2004; Barth, 2009; Wells, 2009; Wulczyn, 2009), and financial problems (CWIG, 2014; Wulczyn, 2009). Substance abuse is also associated with other issues such as mental health problems, domestic violence, and housing instability that could also lead to child abuse or neglect (Barth, 2009; Semidei et al., 2001; Wulczyn, 2009). For example, parents struggling with substance abuse may not provide adequate supervision or medical care because of the effects of drugs (Barth, 2009; CWIG, 2014b; Wells, 2009; Wulczyn, 2009).

Parental substance abuse can also affect child safety and well-being, and the presence of substance abuse often results in a subsequent re-report to CPS (Connell, Bergeron, Katz, Saunders, & Tebes, 2007; Dubowitz et al., 2011; Guo, Barth, & Gibbons, 2006). For example, Connell et al. (2007) found that a family history of substance abuse was associated with a 50%

increased likelihood of a re-report to CPS. Similarly, [Dubowitz et al. \(2011\)](#) found that mothers who abused substances were 71% more likely to be re-reported to CPS. Using national data, [Fluke et al. \(2008\)](#) found that caregiver drug and alcohol use was associated with increased odds of both re-reports and substantiated re-reports.

Families without complex needs often become involved with CPS for issues related to poverty and parenting ([Barth, 2009](#); [Drake & Pandey, 1996](#); [Horton, 2003](#); [McCoy & Keen, 2009](#); [Sedlak et al., 2010](#); [Stith et al., 2009](#); [Wulczyn, 2009](#)). Poverty is one of the strongest risk factors for child maltreatment ([Drake & Pandey, 1996](#); [Horton, 2003](#); [McCoy & Keen, 2009](#); [Sedlak et al., 2010](#)). In the two most recent national incidence studies, household income was strongly correlated with all types of child maltreatment ([Sedlak et al., 2010](#)). This is also supported by research indicating that neighborhood level poverty is associated with increased child maltreatment ([Drake & Pandey, 1996](#)).

Several factors related to parenting are also associated with child maltreatment. These factors include the parent–child relationship ([Stith et al., 2009](#)), an understanding of child development ([Harper Browne, 2014](#); [Horton, 2003](#); [McCoy & Keen, 2009](#)), and child behavioral problems ([Barth, 2009](#)). In a meta-analytic review of risk factors for child maltreatment, factors related to parenting such as the parent–child relationship had a strong effect size ([Stith et al., 2009](#)). Furthermore, a poor understanding of child development is associated with child maltreatment ([Horton, 2003](#)).

3. Home-based, postinvestigation services

CPS provide HBPS after a child abuse investigation to families whose children are at risk of maltreatment but safe enough to remain at home. These services are often determined based on an assessment of family strengths and needs ([USDHHS, 2017](#)), and the most common include case management, concrete, educational, and clinical services (see [Cash & Berry, 2002](#); [Cash & Berry, 2003](#); [Pecora, Whittaker, Maluccio, & Barth, 2000](#); [Simon & Brooks, 2016](#)).

Case management services involve planning, advocating for, obtaining, and following up on an array of services to meet a family's comprehensive needs ([Case Management Society of America, 2010](#); [First 5 L.A., 2014](#); [National Association of Social Workers, 2013](#)). One primary component of case management involves the provision of concrete services to meet basic needs such as food, clothing, shelter, transportation, child care, and legal aid ([Cash & Berry, 2002](#); [Cash & Berry, 2003](#); [Chaffin, Bonner, & Hill, 2001](#); [Pecora et al., 2000](#); [Ryan & Schuerman, 2004](#)).

Educational services teach parents a particular set of skills, often targeting parenting attitudes, knowledge, and skills ([Gershater-Molko et al., 2003](#)). Educational services may be offered as part of a parenting class or group and tend to address child development, discipline, and parent–child interactions ([Cash & Berry, 2002](#); [Cash & Berry, 2003](#); [Chaffin et al., 2001](#)).

Last, clinical services address a family's emotional and behavioral needs and typically involve therapy or counseling to address mental health problems, maladaptive behavior, and other family situations involving life transitions ([Cash & Berry, 2002](#); [Hepworth, Rooney, Rooney, Strom-Gottfried, & Larsen, 2013](#); [Palusci & Ondersma, 2012](#); [Ryan & Schuerman, 2004](#)). This can include therapeutic services to address depression, anxiety, substance use, family violence, and anger management ([Cash & Berry, 2003](#); [Palusci & Ondersma, 2012](#); [Ryan & Schuerman, 2004](#)).

4. Method

4.1. Overview

Data were collected as part of a longitudinal study of a community-based prevention initiative offering services to address the needs of families with children aged 5 years or younger and pregnant women at risk of child maltreatment (See [Brooks, Cohen, et al., 2011](#); [First 5 L.A. 2010a, 2010b, 2014](#)). The study occurred between July 2006 and December 2010 in a large urban area in the United States. To be eligible, families must have had a CPS investigation that resulted in an unfounded or inconclusive disposition, a determination of moderate to very high risk of future maltreatment using a standardized risk assessment tool, and a subsequent referral to a community-based agency for HBPS ([Brooks, Cohen, et al., 2011](#)).

4.2. Sample

The initial sample consisted of 3324 families with children aged 5 or younger that enrolled in the prevention initiative. Of these families, 2929 had services data recorded during the initial assessment. The sample was further restricted to 2008 families with both an initial and termination assessment to capture outcome data. To understand the experiences of families with complex needs, comparisons were made between families with complex needs related to domestic violence, mental health problems, and substance abuse ($n = 836$) and families without complex needs ($n = 1172$). Families with complex needs were identified based on their mean family functioning score using the Family Assessment Form (FAF).

4.3. Measurement

The FAF is a practice-based tool that consists of 39 items measuring family functioning in six domains (see Appendix): (a) living conditions, (b) financial conditions, (c) caregiver support, (d) caregiver–child interactions, (e) developmental stimulation, and (f) interactions between caregivers. The FAF also includes an additional 20 items measuring caregiver history and personal characteristics (FAF factors G and H, respectively). Prior research indicated that the FAF's subscales have interrater

reliability between 75% and 80% and high interitem reliability (Cronbach's alpha) ranging from .68 to .93. Although the preliminary testing only included 70 families, subsequent testing on 240 families produced similar results, albeit with slightly lower reliability coefficients ranging from .58 to .92 (Children's Bureau of Southern California, 2016; McCroskey & Meezan, 1997). The FAF has been described in extensive detail in prior publications (see Franke, Christie, Ho, & Du, 2013; McCroskey & Meezan, 1997; McCroskey, Nishimoto, & Subramanian, 1991).

4.4. Need and complex need

An in-home outreach counselor (IHOC) used the FAF to measure family functioning related to the aforementioned FAF factors and several items in each factor (see Appendix). The FAF was completed at intake during the course of several visits and again, usually by the same IHOC, at termination. The minimum educational requirement for an IHOC was a bachelor's degree in a social science, although several agencies employed IHOCs with a master's degree. Each FAF factor contained multiple items rated on the following 5-point Likert scale: (1) *above average functioning*, (2) *generally adequate functioning*, (3) *moderate problem functioning*, (4) *major problem functioning*, and (5) *poor functioning*. IHOCs could indicate indecision between two categories by using a half-point, such as 2.5, and the treatment plan was supposed to address areas with a score of 3 or higher (McCroskey & Meezan, 1997; McCroskey et al., 1991).

Need was determined by a mean FAF factor score of 3 or higher, which indicates moderate problem functioning (Brooks, Cohen, et al., 2011). Furthermore, IHOCs were trained to address areas with a score of 3 or higher in their treatment plan (McCroskey & Meezan, 1997). Need was also categorized into one of the following areas: concrete need (Factor A, B, or C), educational and parenting need (Factor D or E), or clinical need (Factor F and Factor H, excluding item H3, which measures substance use). Prior research indicated that Item H3 does not appropriately discriminate personal characteristics well as a construct (Franke et al., 2013). It also allowed for the analysis of families with substance abuse need. FAF Factor G measuring caregiver history was included as a demographic characteristic rather than an indicator of need due to its historical nature.

Families with complex needs were identified based on a mean family functioning score of 3 or higher for any one of the following clinical needs: (a) domestic violence (Factor F measuring interactions between caregivers), (b) substance abuse (Item H3 measuring substance abuse), and (c) mental health (all items from Factor H except H3). This cutoff score was chosen because it indicates moderate problem functioning (Brooks, Cohen, et al., 2011; McCroskey & Meezan, 1997; McCroskey et al., 1991). Furthermore, prior research on this population has examined this cutoff score as an indicator of problematic functioning (Brooks, Cohen, et al., 2011; Reuter, Melchior, & Brink, 2016) and prior empirical work indicates that an average score of 3 or higher in these FAF factors indicates is associated with an increased risk of child maltreatment (Brooks, Sessoms, et al., 2011).

4.5. Home-based postinvestigation services

During the baseline assessment, the IHOC recorded services received by caregivers. These data were used to create dichotomous variables capturing the receipt of the following services: (a) case management services, (b) concrete services, (c) educational services, and (d) clinical services. It is important to note that these services were not mutually exclusive; families often received more than one service. Families that received case management services received in-home support, case navigation services, and linkages to other services. Concrete services consisted of financial assistance to meet basic needs such as housing, food, clothing, utilities, medical care, and transportation. Educational services focused on parenting techniques, child development, and basic life skills. Clinical services consisted of therapeutic services such as child and family therapy, general counseling, domestic violence treatment, and substance abuse treatment (First 5 L.A., 2010a, 2010b).

4.6. Post-investigation outcomes

After families completed the prevention initiative, the IHOC recorded one of the following outcomes:

- (1) Client terminated: The caregiver requested to terminate services.
- (2) Client moved or transferred: The family moved out of the area.
- (3) Declined services or noncompliance: The caregiver declined services or was not compliant with the service plan.
- (4) Dropped out: The caregiver dropped out of the prevention initiative.
- (5) Family achieved goals: The caregiver(s) achieved the goals outlined in the initial service plan.
- (6) CPS re-referral: The case was closed because the caregiver was subsequently re-reported to CPS.

4.7. Analytic strategy

Univariate descriptive statistics were used to describe the sample's demographic characteristics, needs, and services. In addition, comparisons were made between caregivers with and without complex needs related to substance abuse, domestic violence, and mental health using Pearson chi-square analyses. Two-sample *t*-tests were used to compare initial

Table 1
Caregiver demographic characteristics.

	Entire sample	Families with complex needs		Chi-square test > ² (df)
	n = 2008 %	No (n = 1172) %	Yes (n = 836) %	
Gender				
Female	96.9	96.8	97.0	> ² (1) = 0.0
Male	3.1	3.2	3.0	
Ethnicity				
Caucasian	10.5	9.4	11.9	> ² (2) = 3.3
African-American	45.3	15.3	15.3	
Hispanic	74.3	75.3	72.8	
Age				
18–25	25.2	26.4	23.5	> ² (2) = 3.0
26–35	47.6	47.6	47.7	
36 and older	27.2	26.0	28.8	
Education				
Less than high school	64.0	62.9	65.4	> ² (2) = 1.2
High school or GED	20.8	21.5	20.0	
College degree	15.2	15.6	14.7	
Income				
Less than \$10,000	67.7	67.6	67.8	> ² (2) = 0.3
\$10,000–\$20,000	20.1	19.9	20.3	
More than \$20,000	12.3	12.5	11.8	
Number of caregivers				
1	69.6	71.8	66.4	> ² (1) = 6.9*
2–3	30.4	28.2	33.6	
Number of children				
1	27.1	27.2	26.9	> ² (2) = 0.7
2–3	47.6	48.2	46.8	
4 or more	25.3	24.7	26.3	
History of abuse ^a				
No	68.7	83.2	48.5	> ² (1) = 268.2***
Yes	31.6	16.8	51.5	

^a History of abuse indicated by a mean score ≥ 3 at baseline assessment using FAF Factor G. * $p < .05$. ** $p < .01$. *** $p < .001$

need between caregivers with and without complex needs. Outcomes were compared between caregivers with and without complex needs using Pearson chi-square analyses. All statistical analyses were conducted using Stata (version 12.1).

5. Results

Table 1 displays the demographic characteristics of the sample and families with and without complex needs. Most caregivers were female (97%) and Hispanic (74%). Nearly half were between the ages of 26 and 35 (48%), with the remaining quarters between 18 and 25 or 36 or older; the mean age was 31.1 ($SD = 7.7$). Nearly 70% of the caregivers earned a combined annual income of less than \$10,000 and 64% had less than a high school education. Most households consisted of one caregiver (70%); slightly less than half of the sample had two to three children (48%); and nearly one third (32%) of caregivers had a history of childhood stability or physical, sexual, or substance abuse, or some combination. It should be noted that although these caregivers had a history of abuse as children, they did not have any prior CPS reports.

When comparing caregivers with and without complex needs, no statistically significant differences emerged with respect to gender, ethnicity, age, level of education, income, and number of children in the home. Only two significant differences emerged with respect to demographic characteristics: the number of caregivers in the home and caregiver history of abuse. More families with complex needs had two to three caregivers in the home relative to those without complex needs (34% vs. 28%, respectively; $\chi^2[1] = 6.9, p < .01$) and significantly more caregivers with complex needs had a history of abuse (52% vs. 17%, respectively; $\chi^2[1] = 268.2, p < .001$).

Table 2 describes the different areas of need (as indicated by the mean FAF score at baseline) and the various HBPS received. As a reminder, a complex needs was indicated by a mean score of 3 or higher for any one of the following clinical needs: (a) domestic violence, (b) substance use, and (c) mental health. Average scores in the three areas of concrete need ranged from 2.5 for living conditions to 2.8 for financial conditions. The mean score for caregiver support was 2.6. With regard to educational and parenting need, the mean score for both was 2.8. The highest areas of need were clinical need related to interactions between caregivers, with a score of 3, followed by mental health problems, which had a mean score of 2.5. The lowest area of need was substance abuse, with a score of 1.6.

When comparing caregivers with and without complex needs, families with at least one complex need had more needs in general. For example, 26.3% of families with complex needs had three to five needs and nearly half (46%) had six to eight needs, compared to 9.5% and 2.8% of families without complex needs, respectively ($\chi^2[2] = 800.4, p < .001$). Results of two-sample t -tests indicated that the mean level of need also differed significantly between families with and without complex

Table 2
Caregiver needs and services at initial assessment ($n = 2008$).

	Entire sample	Families with complex needs ^a		$t(df)^b$
	$n = 2008$ $M(SD)$	No ($n = 1172$) $M(SD)$	Yes ($n = 836$) $M(SD)$	
Concrete need				
Living conditions	2.54 (.70)	2.34 (.60)	2.81 (.75)	-14.8 (1.541)***
Financial conditions	2.80 (.68)	2.63 (.62)	3.03 (.70)	-13.4 (1.654)***
Support to caregivers	2.62 (.64)	2.38 (.51)	2.95 (.65)	-21.4 (1.528)***
Educational/parenting need				
Caregiver/child interactions	2.77 (.65)	2.52 (.56)	3.13 (.61)	-22.5 (1.683)***
Developmental stimulation	2.76 (.68)	2.50 (.56)	3.11 (.66)	-21.4 (1.592)***
Clinical need				
Domestic violence	2.96 (.80)	2.31 (.43)	3.54 (.57)	-44.4 (1.263)***
Mental health problems	2.53 (.63)	2.20 (.41)	3.00 (.58)	-34.1 (1.391)***
Current substance use	1.57 (.73)	1.39 (.46)	1.82 (.92)	-12.2 (1.107)***
Services received	%	%	%	$\chi^2(df)$
Case management	76.9	76.7	77.3	0.09 (1)
Concrete	57.4	57.7	57.1	0.08 (1)
Educational	65.4	63.1	68.7	6.6 (1)**
Clinical	59.7	63.6	65.6	21.5 (1)***
Total number of needs	%	%	%	$\chi^2(df)$
0–2	62.8	87.7	27.8	800.4(2)***
3–5	16.5	9.5	26.3	
6–8	20.8	2.8	45.9	
Total number of services	%	%	%	$\chi^2(df)$
1	22.8	24.9	19.7	13.6 (3)**
2	23.8	24.9	22.3	
3	24.7	22.5	27.6	
4	28.8	27.7	30.4	

^a A complex need was indicated by a mean score of 3 or higher for any one of the following clinical needs measuring domestic violence, mental health, and substance use.

^b Two-sample t tests for numeric variables. Bi-variate Pearson χ^2 tests for categorical variables: * $p < .05$. ** $p < .01$. *** $p < .001$. Satterthwaite's degrees of freedom are provided for the t tests.

needs for each area of need. Furthermore, the complex-need group consisted of caregivers with a mean score of 3 or higher for any clinical need.

Caregivers with complex needs not only had higher mean scores with regard to clinical needs (by definition) but also had higher mean scores for concrete and educational needs. Their mean score ranged from 2.8 to 3.0 for concrete need and was 3.1 for educational and parenting need, whereas their counterparts without complex needs had mean scores ranging from 2.3 to 2.6 for concrete need and 2.5 for educational need. The greatest areas of need were clinical need related to interactions between caregivers (a proxy for domestic violence) with a score of 3.5, followed by mental health problems with a mean score of 3.0, compared to 2.3 and 2.2, respectively, for families without complex needs. The mean score for substance abuse need among caregivers with complex needs was low ($M = 1.8$, $SD = 0.9$) but significantly higher than families without complex needs ($M = 1.4$, $SD = 0.5$; $t[1107] = 12.2$, $p < .001$).

Regarding service receipt, the majority of families received case management services (78%). A little more than half of caregivers received concrete services (57%), whereas 65% of the families received educational services and 60% received clinical services. Again, it is important to note that services were not mutually exclusive. When examining the total number of services received, the distribution was fairly even, with approximately 25% each receiving one, two, three, or four services.

Service receipt did not significantly differ between families with and without complex needs in terms of case management and concrete services, with approximately 77% of both groups receiving case management services and 57% receiving concrete services. Slightly more caregivers with complex needs received educational and parenting services (68.7% vs. 63.1%, respectively; $\chi^2[1] = 6.6$, $p < .010$) and clinical services (65.6% vs. 63.6%, respectively; $\chi^2[1] = 21.5$, $p < .001$) than families without complex needs. With regard to the total number of services, fewer families with complex needs received one or two services and more of them received three or four services ($\chi^2[3] = 13.6$, $p < .001$).

Table 3 displays results regarding reasons for termination of services for the overall sample, which is stratified by families with and without complex needs. Only 2% of caregivers terminated, about 5% moved out of the service area, and 5% declined services. Forty-two percent of families had subsequent CPS involvement and nearly 10% dropped out. Seventy-five percent of families achieved their goals and less than 0.5% had another termination reason. When comparing termination reason by families with and without complex needs, two significant differences emerged. More families with complex needs had subsequent CPS involvement (47% vs. 38%, respectively; $\chi^2[2] = 11.1$, $p < .001$). In addition, fewer families with complex needs successfully completed the prevention initiative (72% vs. 77%, respectively; $\chi^2[2] = 8.6$, $p < .010$).

Table 3
Postinvestigation outcomes.

	Entire sample <i>n</i> = 2008 %	Families with complex needs		Chi-square test > ² (df)
		No (<i>n</i> = 1172) %	Yes (<i>n</i> = 836) %	
Client terminated				
No	98.5	98.3	98.6	> ² (1) = 0.2
Yes	1.5	1.7	1.4	
Client moved/transferred				
No	95.0	94.9	95.2	> ² (1) = 0.2
Yes	5.0	5.2	4.8	
Refused services, non-compliance				
No	95.2	95.5	94.9	> ² (1) = 0.4
Yes	4.8	4.5	5.1	
Dropped out				
No	90.4	91.3	89.1	> ² (1) = 2.5
Yes	9.6	8.7	10.9	
Family achieved goals				
No	25.1	22.7	28.5	> ² (2) = 8.6**
Yes	74.9	77.3	71.5	
CPS re-referral				
No	58.4	62.0	53.1	> ² (2) = 11.1**
Yes	41.6	38.0	46.9	

* $p < .05$.

** $p < .01$.

*** $p < .001$.

6. Discussion and implications

This study added to the knowledge base by describing the demographic characteristics and needs of families referred for HBPS following their initial investigation by CPS. Our findings highlight how families with complex needs referred for HBPS appear similar to their counterparts without complex needs with respect to most demographic characteristics. However, families with complex needs are different in important ways. For example, families with complex needs had more needs in multiple areas that were greater in severity, more of them had subsequent CPS involvement, and fewer of them successfully completed the prevention initiative. These findings highlight the importance of ensuring that families with complex needs receive services to address their multiple needs, given that they have more needs and worse outcomes. Future studies should examine whether matching services and complex needs following a CPS investigation is associated with important outcomes such as CPS recidivism and changes in need.

Families with complex needs were more likely to have a history of abuse and tended to have more than one caregiver in the home. It is no surprise that families with complex needs were more likely to have a history of abuse, considering that they all had need related to either domestic violence, mental health, or substance abuse. Furthermore, the finding that caregivers with complex needs were more likely to have more than one caregiver is unsurprising because nearly all of the families with complex needs had need related to domestic violence, which by definition involves more than one caregiver. Nevertheless, CPS social workers should keep these demographic characteristics in mind because complex needs might not be readily apparent or quickly disclosed, so these demographic characteristics might serve as potential indicators to identify families with complex needs.

With respect to services, our finding that families with complex needs more often received three or four types of services and more educational and clinical services relative to families without complex needs is encouraging. Other studies have shown that these needs may go unmet or unaddressed altogether, especially for families experiencing domestic violence, mental health, or substance abuse problems (Bagdasaryan, 2005; Cash & Berry, 2002; Chambers & Potter, 2008; Choi & Ryan, 2007). Considering that caregivers with complex needs whose problems are more severe tend to receive an open CPS case as opposed to prevention services, it is possible that caregivers with complex needs in our sample were more amenable to various services because of their voluntary nature. This highlights the importance of identifying and providing services early in the service continuum before complex needs become more severe (Jonson-Reid et al., 2010; Mendoza, 2014). It is equally important for CPS social workers to understand the child welfare services continuum to determine the best service response depending on a family's presenting problems. Part of this decision-making process should involve an evaluation based on not only a family's level of risk but also a continuum of need. This is particularly important for families with complex needs that would likely benefit from tailored interventions addressing the range and severity of their interconnected needs (Rankin & Regan, 2004). Future studies should examine the differences among families with one or more complex needs and the types of interventions that are best suited to meet these needs.

Some caregivers referred for HBPS had very few needs, calling into question the screening protocol for families referred for HBPS after a CPS investigation. Nearly all of the caregivers without complex needs (90%) had relatively few needs (zero to two needs). Although this need category was created to eliminate empty cells, thus enabling Pearson chi-square tests,

analyses not shown here indicated that half of caregivers without complex needs had no needs, 25% had one need, and 13% had two needs ($\chi^2[8] = 986.1, p < .001$). For caregivers with complex needs, none had zero needs, 15% had one need, and 13% had two needs. It is possible that HBPS were provided due to CPS investigation protocols requiring services to be in place for families with young children to close the investigation. Alternatively, it is possible that caregivers did not disclose their needs during the initial assessment, thus giving the impression that they had fewer needs. Nevertheless, it is important to ensure that families most in need of prevention services are referred because families with fewer needs could be taking service slots from other families with complex needs. Prior studies have found that a mismatch between the number of preventive slots relative to a community's need can affect service provision, leading to an insufficient number of service slots in some high-need communities (Stanley & Kovacs, 2003; Wulczyn, Feldman, Horwitz, & Alpert, 2014). Families without complex needs might benefit more from less intensive interventions consisting of parenting and poverty alleviation whereas families with complex needs would benefit from more intensive and comprehensive, home-based interventions. Prior research has found a distinct class of low-need families that might be better served with less-intensive services based on their need profiles (Jarpe-Ratner, Bellamy, Yang, & Smithgall, 2015). In addition, there is evidence that lower-risk caregivers benefit from most types of service provision, whereas higher-risk caregivers benefit from more specific interventions, particularly those that meet their concrete needs (Chaffin et al., 2001).

Last, this prevention initiative was funded by \$50 million for 6 years, so it is important to understand the particular benefits from an investment perspective. Several reports highlighted the benefits of participation in the prevention initiative, especially for families that were fully engaged in services (Brooks, Cohen, et al., 2011; First 5 L.A., 2010b). What is less clear is what specific interventions result in the best outcomes. Furthermore, it is important to understand how similar prevention programs fare in comparison to other less expensive programs. Future studies should conduct cost analyses that examine prevention programs targeting clients with different levels of need, risk, and service dosage. Considering that the lifetime economic burden attributed to new cases of maltreatment is estimated to cost billions of dollars in the United States, it is important to continue to fund prevention initiatives targeting families at risk of maltreatment (Fang, Brown, Florence, & Mercy, 2012).

6.1. Limitations

Despite the contributions of this study, several limitations should be noted. These data provided only a snapshot of the needs and services of caregivers participating in the prevention initiative. Initial analyses regarding needs and services focused on data from the initial assessment conducted by IHOCs. Importantly, this study did not include data from subsequent assessments. Analyses not presented here indicated that some families that did not receive services immediately following the initial assessment had received services by the time they left the program. However, these data could not be used due to numerous missing observations.

Another limitation of this study stems from missing data. As previously mentioned, nearly one fifth of the initial sample did not have complete services data following the initial assessment. Furthermore, another fifth of the initial sample had no termination assessment and were thus excluded because a termination assessment was required to examine outcomes. A comparison of demographic characteristics between the final study sample and caregivers who were excluded revealed only one significant difference; caregivers with missing data were more likely to have a lower household income. Thus it is possible that the exclusion of these caregivers might partially explain the low rates of refusal of services and dropout in this sample.

Last, the decision to categorize complex needs a priori is also a potential limitation. Although the aforementioned literature review provided a sufficient rationale for defining a complex need as having a clinical need related to either domestic violence, mental health, or substance abuse, the current operationalization does not account for the severity, interaction, or the number of complex needs because it was beyond the scope of this study to look at such combinations. Thus findings might have been different had these additional indicators of need been included.

7. Conclusion

CPS decision making is difficult and it is important to ensure that services are provided to families most in need of services. This study highlighted that many families were referred for HBPS following a CPS investigation despite having relatively few needs. Furthermore, among families referred for HBPS, a subgroup of families with complex needs related to domestic violence, mental health, and substance abuse emerged that appeared to be similar but had vastly different need profiles from families without complex needs. Findings from this study indicate that the CPS screening process needs to identify families with and without complex needs to ensure the appropriate service response. Furthermore, CPS agencies should provide HBPS to families with complex needs because they have more needs in multiple areas and worse outcomes relative to families without complex needs. Future studies should examine whether the provision of matched services to address complex needs following a CPS investigation improves CPS recidivism and changes in need.

Acknowledgments

We thank First 5 LA and the Los Angeles Department of Children and Family Services for their support of this study. Furthermore, we would like to thank Dr. Lawrence Palinkas and Dr. Thomas Lyon for their invaluable feedback on this manuscript.

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Appendix Family functioning factors and items (shortened version)¹

Section A: Living condition

A1	Cleanliness/Orderliness – Outside Environmental Conditions
A2	Cleanliness/Orderliness – Outside Home Maintenance
A3	Cleanliness/Orderliness – Inside Home Maintenance
A4	Safety – Outside Environmental Conditions
A5	Safety – Outside Home Maintenance
A6	Safety – Inside Home Maintenance

Section B: Financial conditions

B1	Financial Stress
B2	Financial Management
B3	Financial Problem Due to Welfare System/Child Support
B4	Adequate Furniture
B5	Availability of Transportation

Section C: Support to caregivers

C1	Support from Friends and Neighbors and Community Involvement
C2	Available Child Care
C3	Chooses Appropriate Substitute Caregivers
C4	Available Health Care
C5	Provides for Basic Medical/Physical Care
C6	Ability to Maintain Long-Term Relationship

Section D: Caregiver/child interactions

D1	Understands Child Development
D2	Daily Routine for Child(ren)
D3	Use of Physical Discipline
D4	Appropriateness of Disciplinary Methods
D5	Consistency of Discipline
D6	Bonding Style with Child(ren)
D7	Attitude Expressed About Child(ren)/Caregiver Role
D8	Takes Appropriate Authority Role
D9	Quality And Effectiveness of Communication (Caregiver to Child(ren))
D10	Quality And Effectiveness of Communication (Child(ren) to Caregiver)
D11	Cooperation/Follows Rules and Directions
D12	Bonding to Caregiver

Section E: Developmental stimulation

E1	Appropriate Play Area/Things – Inside Home
E2	Provides Enriching/Learning Experiences for Child(ren)
E3	Ability and Time for Child(ren)'s Play
E4	Deals with Sibling Interactions

Section F: Interactions between caregivers

F1	Conjoint Problem Solving Ability
F2	Manner of Dealing with Conflicts/Stress
F3	Balance of Power
F4	Supportive
F5	Caregivers' Attitude toward Each Other
F6	Ability to Communicate (Verbal and Nonverbal)

Section G: Caregiver history

G1	Stability/Adequacy of Caregiver's Childhood
G2	Childhood History of Physical Abuse/Corporal Punishment
G3	Childhood History of Sexual Abuse
G4	History of Substance Abuse
G5	History of Aggressive Act as an Adult
G6	History of Being an Adult Victim
G7	Occupational History
G8	Extended Family Support

Section H: Caregiver personal characteristics

H1	Learning Ability/Style
H2	Ability to Trust
H3	Current Substance Use
H4	Passivity/Helplessness/Dependence
H5	Impulse Control
H6	Cooperation
H7	Emotional Stability (Mood Swings)
H8	Depression
H9	Aggression/Anger
H10	Practical Judgment/Problem-Solving and Coping Skills
H11	Meets Emotional Needs of Self/Child
H12	Self-Esteem

¹ Please refer to <http://www.familyassessmentform.com> for more information about the FAF.