The Center for
State Child Welfare Data

Do Family Support Centers Reduce Maltreatment Investigations? Evidence from Allegheny County

Fred Wulczyn and Bridgette Lery

December 2018

CHAPIN HALL
AT THE UNIVERSITY OF CHICAGO

1313 E. 60th Street
Chicago, IL 60637
(773) 256.5100
fcda.chapinhall.org

Introduction

In this report, we examine whether the presence of a Family Support Center (FSC) is associated with lower maltreatment investigation rates in neighborhoods with an FSC when compared with other, similar neighborhoods that do not have FSCs. As implemented in Allegheny County, FSCs provide a range of social services designed to support families generally and families raising young children in particular. Although the FSCs in Allegheny County tend to be found in areas with higher levels of poverty, we take advantage of the fact that FSCs are located in socio-economically diverse communities to examine whether the presence of an FSC is associated with lower maltreatment investigation rates as measured at the community level.

Social Determinants, Collective Efficacy, and Family Support Centers

The idea that FSCs might lower community-level investigation rates hinges on two interrelated ideas. First, there is a substantial body of evidence that points to community-level risk factors as one reason why involvement with the child welfare system is higher in some communities than others (Coulton, Korbin, Su, & Chow, 1995; Coulton & Pandey, 1992; Eckenrode, Smith, McCarthy, & Dineen, 2014; Molnar, Buka, Brennan, Holton, & Earls, 2003). That evidence points to what are frequently described as social determinants of health and well-being. Broadly speaking, the literature on social determinants suggests that the potency of individual level risk factors is dependent on the social context: it is one thing to grow up in a poor family, but it is an altogether different matter to grow up in a poor family in the midst of other poor families (Sampson & Bean, 2006; Sampson, Morenoff, & Gannon-Rowley, 2002). Whether it is the quality of local services, the supply of jobs, the strength of social ties, or the availability of recreational outlets, poor communities have fewer assets to offer their residents (CSDH, 2008). By creating structures around which lifestyles evolve, social context either alleviates or exacerbates person-level risks, depending on the interplay of people and place. Second, among other issues, communities characterized by concentrated disadvantage often lack collective efficacy or the ability of community residents to organize themselves around the common challenge of raising children (Browning, Burrington, Leventhal, & Brooks-Gunn, 2008; Daro & Dodge, 2009; Morenoff, Sampson, & Raudenbush, 2001; Sampson, Morenoff, & Earls, 1999). Collective efficacy is the mechanism whereby one might expect lower investigation rates – communities with structures that support child rearing will tend to have fewer investigations because the community supports families in ways that alter the family processes that attract the formal involvement of the child welfare agency in those families.

If risk and protective factors embedded within a community shift the risk and protective balance in favor of families raising children, then there is a growing body of literature that suggests interventions targeted at the community-level have positive effects. For example, Communities That Care (Kim, Gloppen, Rhew, Oesterle, & Hawkins, 2015) builds a diverse group of stakeholders in a community by training coalition members in selecting and implementing tested policies and interventions in the community. The services are designed to reduce risk factors and strengthen protective factors within the community, with the expectation that youth in those communities will change their behavior. Importantly, the use of evidence to establish a community risk profile is an integral part of the strategy for selecting evidence-based interventions. Communities are invited to select the risk factors most important to stakeholders, a community activation strategy that leaves stakeholders in charge. Cluster randomized trials have shown increased levels of community commitment to prosocial involvement (a community-level outcome) and increased social skills on the part of youth,

among other positive benefits of the strategy. Although Communities That Care does not directly target maltreatment or the need for foster care, the intervention does serve as an example of what community stakeholders can do when they work together.

Research Questions, Data, and Methods

With the foregoing in mind, we set out to understand whether the presence of FSCs funded by the Allegheny County Department of Human Services can be linked to the number of maltreatment investigations in the areas where FSCs are located. The evidence we provide is organized around a set of interlocking research questions. We start by showing the overall rate of investigation. In this case we are using a count of first investigations for the years 2009 through 2013. By combining the count from individual years, we control for noise associated with year-to-year random variation in the number of initial investigations. To adjust for the size of the area, we use the count of children living in the area as of 2010 to compute the investigation rate per thousand children. We then turn our attention to the investigation rate and the characteristics of the areas. The questions we ask are:

- How is the investigation rate related to the level of social disadvantage?
- How is the investigation rate related to the presence of an FSCs?
- How are the investigation rate, the level of social disadvantage, and the presence of an FSCs interrelated?

Regarding the first question, we expect the investigation rate to be higher in areas with higher levels of social disadvantage. Our measure of disadvantage, which we describe in more detail below, incorporates a range of indicators including poverty, residential mobility, unemployment, household structure, and education level of the local population. The connection between investigation rates and social disadvantage is well established. Our analysis examines whether investigations and social disadvantage in Allegheny County follow the typical pattern.

The second question asks where FSCs are located. By design, leadership in Allegheny County located the FSCs in areas where need, measured at a population-level, is higher. Because FSC service areas are not always aligned with municipal boundaries, we had to construct FSC service areas from the ground up. To do this, we identified the geographical area served by each FSC and then aligned those service areas with tract-level census data from 2010, which were then aggregated to the FSC service area level. For areas without an FSC, we used standard neighborhood and municipal boundaries, as defined by the Department of Human Services. Once we were finished with this process, we were left with 192 areas, of which 55 were served by an FSC. The areas used in the analysis averaged about 1240 resident children, regardless of whether there was an FSC in the area.

The third question addresses whether areas with an FSCs have lower investigation rates than similar areas without an FSCs. For this analysis, we are looking for what might be called an upstream preventive benefit of having an FSCs in place, with the impact FSCs have on maltreatment investigations recorded at the community level. In the simplest terms, we expect lower rates of investigation in areas with an FSC because the FSC alters the balance of risk and protective factors at the community level such that communities with an FSC are less dependent on the front door of the child protection system as a mechanism of child protection.

The primary source of data for the study comes from the Allegheny County Department of Human Services. Using their administrative records, we calculated the number of maltreatment investigations by FSC and non-FSC area. Our counts included only first-ever investigations because our theoretical model asks whether the presence of an FSC reduces initial investigations. Subsequent investigations, though important, implicate the process and quality of the services provided by the child welfare system more broadly and represent a fundamentally different albeit crucial set of questions. Here, we are interested simply in whether the presence of an FSC and the number of initial investigations are linked.

To analyze the data, we added data about each area from the US Census. As discussed, we expect the number of investigations to vary by the level of social disadvantage. To measure social disadvantage, we combined multiple social indicators into a summary index. The indicators, which are linked to the risk of maltreatment (see, for example, Coulton, Korbin, Su, & Chow, 1995; Freisthler, 2004; Molnar, Buka, Brennan, Holton, & Earls, 2003), include:

- Percentage of children living in families with income below the poverty level
- Percentage of families headed by females
- Percentage of adults with less than a high school education
- Percentage of households without a vehicle
- Percentage of adults who are unemployed
- Percentage of families receiving public assistance
- Percentage of homes that are vacant
- The percentage of families renting their home

To compute the summary index, we ordered the areas by each indicator one-by-one and then divided the areas into quartiles (by indicator). We then assigned a rank score of one to areas with the lowest level of child poverty (bottom quartile), for example, and a four to areas with the highest levels (top quartile). A two or three was assigned to the areas in between. The rank scores were then summed across indicators and divided by eight (the number of indicators) to produce a summary index of disadvantage, with a range from one to four, with four representing areas having the highest relative levels of social disadvantage across all indicators. We refer to this index as the index of social disadvantage (ISD).

We analyzed the data with a fixed effect Poisson count model with variable exposure. Poisson count models estimate the expected number of events – investigations in this case – given the size of the population of children living in the area. Variable exposure simply refers to the fact that the size of the risk set – children living in each area – varies from one area to another. In this context, the count models, adjusted for the population of children, offer a number of advantages over standard regression models, as discussed more thoroughly in Osgood (2000).

Findings

Investigation Rates in Allegheny County

Figure 1 shows the investigation rate in Allegheny County for the years 2009 through 2013 inclusive. For the years from 2009 through 2012, the investigation rate declined from about 22 per thousand to 15 per thousand, a decline of about one-third. Between 2012 and 2013, the rate increased, but to a level that was still well below the level reported in 2009.

Figure 1: Number of First Maltreatment Investigations per 1,000 Children in Allegheny County: 2009-2013

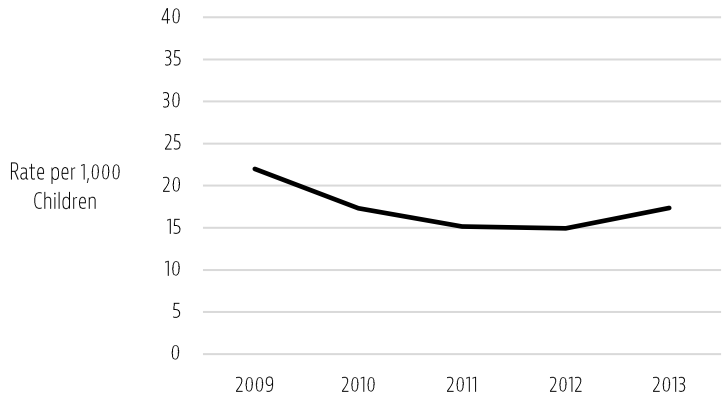
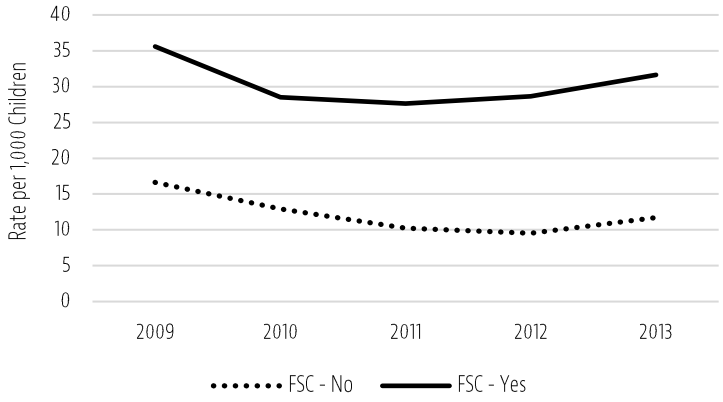


Figure 2 shows the same evidence for areas with an FSC (FSC – Yes) and those without an FSC (FSC – No). Trends in areas divided this way followed the same general pattern. Although investigations increased toward the later part of the time series, rates were still lower in 2013 than in 2009. In areas with an FSC, the initial rate of decline was a bit sharper between 2009 and 2010 than in areas without an FSC, flattened out earlier (2011-2012) before rising again between 2011 and 2013.

Figure 2: Number of First Maltreatment Investigations per 1,000 Children in Allegheny County by Family Support Center Location: 2009-2013



Where Are the FSCs Located?

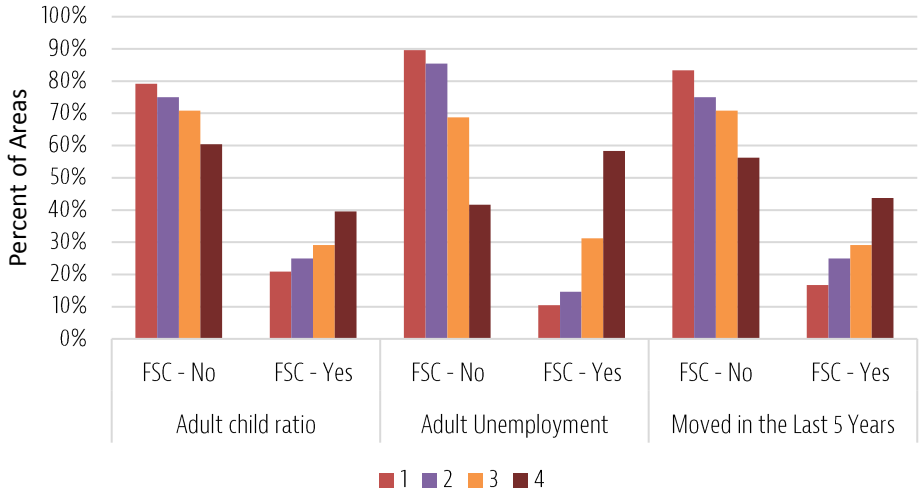
FSCs tend to be located in areas where, based on the overall level of social disadvantage, the need for those services is greatest. In the case of services for families with a risk of contact with the child welfare system, that means locating services in areas that have higher levels of need as measured by indicators of risk associated with CPS involvement, the need for preventative services, and placement into foster care. The literature suggests that these risks are multi-dimensional, with measures of income security, family/household structure, and social capital among the indicators scholars have used to isolate community-level risk factors (Coulton, Korbin, Su, & Chow, 1995; Freisthler, 2004; Molnar, Buka, Brennan, Holton, & Earls, 2003).

To demonstrate how FSCs are distributed across Allegheny County, we provide four pieces of evidence. The first three show the location of FSCs in areas organized into groups based on the child-adult ratio, the adult unemployment rate, and percentage of families that moved within the last five years. Each indicator is a risk factor that elevates the likelihood of contact with the child protection system. The forth piece of evidence uses the index of social disadvantage (ISD) and the number of investigations in a statistical model to demonstrate how the number of investigations and the level of social disadvantage pinpoint where FSCs are located.

In total, there are 55 areas served by an FSC or about 28 percent of all areas. As expected, the location of FSCs is concentrated in communities with fewer adults per child, more unemployment, and more residential instability. For example, in Figure 3, areas are organized into four groups based on quartiles. The areas with the lowest child-adult ratios are in the first quartile (1) whereas areas with the highest child-adult ratios are in the fourth quartile (4). Areas are grouped in the same way for adult unemployment and residential stability (residents who moved in the last 5 years).

For each indicator, the likelihood an FSC will be found in an area rises with the quartile (i.e., 1 to 4). Among areas with the highest unemployment rates, 58 percent have an FSC (Adult Unemployment – FSC Yes). Of areas with the highest child-adult ratios, 39 percent have an FSCs.

Figure 3: FSC Locations by Social Indicator and ISD Quartile (1 through 4)



FSCs are also concentrated in areas with higher levels of residential instability. Eight FSCs are located in areas where residents are the least likely to have moved in the past five years. Twenty-one FSCs are located in areas with the highest rates of residential instability.

Although FSCs are concentrated in areas with higher rates of unemployment, FSCs are also found in areas with lower unemployment rates. The reason why has to do with the fact that areas are heterogeneous with respect to the underlying risks – areas with low unemployment may also, at the same time, have more families with less than a high school education. In other words, the indicators of risk are strongly but not perfectly correlated.

To better understand the location of FSCs, we used the summary index of disadvantage in a statistical model that considers the location of FSCs as a function of social disadvantage and the number of investigations. Reported in Table 1, the model results indicate that the odds of having an FSC increases as the index of social disadvantage rises and as the number of investigations increases. Of the two, social disadvantage is the more important factor. FSCs are not located in areas with the largest number of reports per se; rather, they are located where social disadvantage is greater.

Table 1: Location of FSCs by Investigation Rate and Social Disadvantage

Fixed Effect	Coefficient	Standard error	t-ratio	p-value	Odds Ratio	Confidence Interval
Intercept (FSC)	-0.93	0.23	-4.02	0.001	0.396	(0.251, 0.625)
Average # of Investigations	0.04	0.01	3.06	0.003	1.038	(1.013, 1.063)
Social Disadvantage (ISD)	1.94	0.32	6.06	0.001	6.937	(3.693, 13.029)

Investigations and Social Disadvantage

Evidence pertaining to the association between investigation rates and FSCs is contained in Table 2. The analysis asks whether, given the overall rate of investigation, trends over time (i.e., see Figure 2), and the level of social disadvantage,

areas with an FSC have a lower rate of investigation than areas without an FSC. The evidence is presented in a step-wise fashion, with each of seven different models showing how the investigation rate varies by place (social disadvantage) and time. In the final model, the presence of an FSC is treated as an intervention, with the expectation that areas with an FSC will have a lower investigation rate.

The first model looks only at the maltreatment investigation rate. In the context of a Poisson model with variable exposure, the event rate (ratio) measures how the event rate (the intercept in the model which is listed as the investigation rate in Table 2) changes as factors are added to the model (e.g., time and social disadvantage). For example, in Model 1 of Table 2, the investigation rate is 17.35, which is the identical to the weighted investigation rate computed over the five years of data.

Model 2 of Table 2 looks at the investigation rate over the five years. The first time variable – Time – measures the overall time trend. In this case, as seen in Figure 1, the overall trend is lower. The p-value, which represents the statistical significance, indicates that the investigation rate in each subsequent year (2010, 2011, 2012, and 2013) is significantly lower than 2009. However, the time squared variable is meant to judge whether the upturn in the investigation rate between 2012 and 2013 is significant (see Figure 1). The result indicates that, indeed, the upturn between 2012 and 2013 was a significant change in the overall pattern.

Models 3 and 4 examine the association between investigation rates and the presence of an FSC and social disadvantage, respectively. As expected, the presence of an FSC is associated with an increase in the investigation rate (Model 3), due in part to the fact that FSCs are located in areas where the investigation rate is higher. The impact of social disadvantage is shown in Model 4, which shows that social disadvantage is also correlated with significantly higher investigation rates. More specifically, each unit increase in social disadvantage raises the predicted investigation rate by another 2.32 investigations per 1000 children.

The next two models – Model 5 and Model 6 – expand the base models by adding time (Model 5) and time with social disadvantage (Model 6) to a model that considers whether the presence of an FSC is associated with lower maltreatment rates. For Model 5, the investigation rate and the event rate ratios associated with time and FSC are of the same order of magnitude when compared with Models 2 and 3. FSCs are associated with higher investigation rates; the time trend shows the overall reduction in investigation rates with an upturn at the end of the time series. However, in Model 6, with the joint effects of time and social disadvantage included, the impact of the FSC on investigation rates is washed out, once differences in the level of social disadvantage are considered. In other words, when areas with an FSC are compared with areas without an FSC, the investigation rates are similar provided the level of social disadvantage is considered.

Table 2: Poisson Count Model of Investigation Rates, Time, Family Support Centers and Social Disadvantage

Model Number, Investigation Rate, FSC, Time, and ISD	Coefficient	Standard error	t-ratio	p-value	Event Rate Ratio	Confidence Interval
Model 1						
Investigation Rate	2.85	0.01	413.13	0.001	17.35	(17.117, 17.587)
Model 2						
Investigation Rate	2.84	0.08	34.74	0.001	17.18	(16.946, 17.416)
Time	-0.44	0.04	-10.12	0.001	0.64	(0.611, 0.673)
Time Squared	0.06	0.01	10.57	0.001	1.07	(1.057, 1.074)
Model 3						
Investigation Rate	2.76	.01	37.09	0.001	15.85	(15.622, 16.087)
FSC	0.91	0.01	6.79	0.001	2.49	(2.425, 2.560)
Model 4						
Investigation Rate	2.78	0.04	75.36	0.001	16.20	(15.956, 16.445)
Social Disadvantage (ISD)	0.84	0.04	22.43	0.001	2.32	(2.288, 2.359)
Model 5						
Investigation Rate	2.75	0.07	37.13	0.001	15.70	(15.466, 15.931)
FSC	0.91	0.13	6.79	0.001	2.49	(2.425, 2.560)
Time	-0.44	0.04	-10.12	0.001	0.64	(0.611, 0.673)
Time Squared	0.06	0.01	10.57	0.001	1.07	(1.057, 1.074)
Model 6						
Investigation Rate	2.77	0.04	74.11	0.001	16.02	(15.771, 16.265)
FSC	0.02	0.07	0.24	0.807	1.02	(0.986, 1.051)
Time	-0.44	0.04	-10.12	0.001	0.64	(0.611, 0.673)
Time Squared	0.06	0.01	10.57	0.001	1.07	(1.057, 1.074)
Social Disadvantage (ISD)	0.84	0.04	20.52	0.001	2.31	(2.270, 2.352)
Model 7						
Investigation Rate	2.76	0.04	74.74	0.001	15.84	(15.597, 16.095)
FSC	0.76	0.27	2.84	0.005	2.15	(1.901, 2.423)
Time	-0.44	0.04	-10.12	0.001	0.64	(0.611, 0.673)
Time Squared	0.06	0.01	10.57	0.001	1.07	(1.057, 1.074)
Social Disadvantage (ISD)	0.91	0.05	19.12	0.001	2.49	(2.435, 2.541)
FSC x ISD	-0.24	0.08	-2.83	0.005	0.79	(0.757, 0.817)

The final model – Model 7 – tests whether ecologically similar areas (i.e., the same level of social disadvantage) have different investigation rates if there is an FSC present. These results show that time trends are consistent with prior models showing a decline in investigations followed by a modest increase coinciding with 2012 and 2013. The model also shows a significant difference between areas with and without an FSC, provided the interaction between FSC location and the level of social disadvantage is included. This last term (FSC x ISD) is analogous to a treatment effect. In areas with an FSC, investigation rates were, on average, lower than in areas without an FSC during the period from 2009 to 2013.

Summary

There is considerable interest in whether FSCs influence the risk of maltreatment. The reasons why are obvious: maltreatment has a profound effect on the well-being of children across a range of developmental domains. Strategies that prevent maltreatment in the first instance are one way to mitigate the pernicious effects of maltreatment.

In this paper, we set out to draw a line connecting the presence of FSCs and maltreatment investigations. FSCs in Allegheny County are, by design, located in areas with elevated levels of social disadvantage. Nevertheless, as deployed in Allegheny County, FSCs are located in ecologically diverse areas. We used this fact to test whether similar areas, with and without FSCs, have different investigation rates per 1,000 children. We found that areas within Allegheny County served by FSCs had fewer maltreatment investigations once the level of social disadvantage and population size were considered.

Before drawing the findings together in summary form, it is important to note the limitations of an observational study. First, maltreatment investigations are at best an indirect measure of maltreatment. Once an investigation starts, the Department of Human Services has to determine whether a finding of abuse and neglect is warranted. We did not consider substantiated allegations of maltreatment, in part because once an investigation is launched, the involvement of the child welfare agency becomes another, albeit important, source of variation. In the long run, though it was outside the scope of this study, it will be important to understand the interaction between FSCs and the work of the child welfare agency in those same areas. We also did not examine the effect of FSC-delivered services on families and children involved in maltreatment investigations. For example, if served by an FSC following a maltreatment report, do families have lower reporting or recurrence rates? These are important questions and the answers would provide a decidedly more comprehensive assessment of where family support services fit along the continuum of child welfare services. Finally, the results of observational studies provide relatively weak evidence of impact when compared with experimental or quasi-experimental designs. In the case of FSCs, random assignment of FSCs to areas stratified on need would yield more compelling evidence of impact. We return to this point later in the summary.

With those important limitations in mind, the findings align with what one would expect, given the presumed benefits of FSCs in the context of the communities where they are located. Theories that weigh the effects of context on individual-level risk suggest that lifestyles are affected by community assets and structures. If FSCs, by their presence, strengthen the mechanisms of collective efficacy, then one can imagine that fewer families will find themselves over the line that separates families prompting a maltreatment investigation from those that do not. In this model, individuals need not receive a service in the traditional sense to derive a benefit. Rather, by altering the patterns of interaction and sense of connectedness, families may feel supported by their community and the assorted assets found there. If so, this would be one way an upstream preventive effect manifests itself. Members of the community find it isn't necessary to call the child welfare agency because fewer families step over that particular line.

Of course, beyond their mere presence, we have said little about what it means to have an FSC within the boundaries of a community. The FSCs in Allegheny do not approach service delivery in a uniform way so inferences about the precise nature of their work and the impact on collective efficacy, if that is the mechanism at work, are hard to make. It is also true that lower investigation rates alone are not an indication that children are doing well or that the effects of social disadvantage are somehow mitigated. Broad notions of child welfare, in a developmental sense, require a range of

community assets – i.e., day care, schools, and health care – to raise children who will go on to be fulfilled members of their community. Nevertheless, if what we call the child welfare system has a role to play in the positive development of children, then the findings from Allegheny County provide a basis for optimism along with a rationale for further investment. The investments, though, have to be matched to a thoughtful evidence-building strategy. First, careful attention has to be paid to how FSCs link to an upstream preventive effect. How exactly are FSCs expected to improve collective efficacy, if that is the mechanism? If that is not the specific mechanism, how then do FSCs touch families before they slip closer to the line that leads others in the community to call the child welfare system? There are myriad ways FSCs might affect community dynamics and support families. It is important to articulate how that happens so that investments in families through the FSC can be targeted with greater precision.

With a theory that explains why FSCs are expected work in hand, it will be important to test implementation using more rigorous designs. Random assignment at the neighborhood level would be a good starting point, particularly if neighborhoods are stratified on measures of collective efficacy prior to implementation. It is one thing to leverage strong, pre-existing community assets and another to place FSCs in communities with fewer assets at the outset. It may simply be that for FSCs to be effective, their placement depends on a set of pre-existing community assets that are in a sense activated by the FSC.

FSCs harken back to the days when settlement houses provided a gathering place where members of the community could strengthen their social ties. Durham Connects and Communities That Care (Daro & Dodge, 2009; Dodge, Goodman, Murphy, O'Donnell, & Sato, 2013; Kim, Gloppen, Rhew, Oesterle, & Hawkins, 2015), as examples of well-studied interventions built around similar ideas, lend credibility to the idea that communities play a vital role in protecting children. The experience in Allegheny County, which builds on that tradition, provides a framework for considering future investments along these same lines, especially when paired with a strong theory of change.

References

Browning, C. R., Burrington, L. A., Leventhal, T., & Brooks-Gunn, J. (2008). Neighborhood Structural Inequality, Collective Efficacy, and Sexual Risk Behavior Among Urban Youth. Journal of Health and Social Behavior, 49, 269–285.

Coulton, C. J., Korbin, J. E., Su, M., & Chow, J. (1995). Community Level Factors and Child Maltreatment Rates. Child Development, 66, 1262–1276.

Coulton, C., & Pandey, S. (1992). Geographic Concentration of Poverty and Risk to Children in Urban Neighborhoods. American Behavioral Scientist.

CSDH. (2008). Closing the Gap in a Generation: Health Equity Through Action on the Social Determinants of Health. World Health Organization (pp. 1–256). Geneva.

Daro, D., & Dodge, K. A. (2009). Creating community responsibility for child protection: possibilities and challenges. The Future of Children / Center for the Future of Children, the David and Lucile Packard Foundation, 19, 67–93.

Dodge, K. A., Goodman, W. B., Murphy, R. A., O'Donnell, K., & Sato, J. (2013). Randomized controlled trial of universal postnatal nurse home visiting: impact on emergency care. Pediatrics, 132 Suppl 2, S140–6.

Eckenrode, J., Smith, E. G., McCarthy, M. E., & Dineen, M. (2014). Income Inequality and Child Maltreatment in the United States. Pediatrics, 133, 454–461.

Freisthler, B. (2004). A Spatial Analysis Of Social Disorganization, Alcohol Access, And Rates Of Child Maltreatment In Neighborhoods. Children and Youth Services Review, 26, 803–819.

Kim, B. K. E., Gloppen, K. M., Rhew, I. C., Oesterle, S., & Hawkins, J. D. (2015). Effects of the Communities That Care Prevention System on Youth Reports of Protective Factors. Prevention Science: The Official Journal of the Society for Prevention Research, 16, 652–662.

Molnar, B., Buka, S., Brennan, R., Holton, J., & Earls, F. (2003). A Multilevel Study of Neighborhoods and Parent-to-Child Physical Aggression: Results from the Project on Human Development in Chicago Neighborhoods. Child Maltreatment, 8, 84–97.

Morenoff, J. D., Sampson, R., & Raudenbush, S. W. (2001). Neighborhood Inequality, Collective Efficacy, and the Spatial Dynamics of Urban Violence. Criminology, 39, 517–558.

Osgood, D. W. (2000). Poisson-based regression analysis of aggregate crime rates. Journal of Quantitative Criminology, 16, 21–43.

Sampson, R., & Bean, L. (2006). Cultural Mechanisms and Killing Fields: A Revised Theory of Community Level Racial Inequality. The Many Colors of Crime: Inequalities of Race.

Sampson, R., Morenoff, J., & Earls, F. (1999). Beyond Social Capital: Spatial Dynamics of Collective Efficacy for Children.

American Sociological Review, 64, 633–660.

Sampson, R., Morenoff, J., & Gannon-Rowley, T. (2002). Assessing "Neighborhood Effects": Social Processes and New Directions in Research. Annual Review of Sociology, 28, 443–478.