THE PROCESS OF THE IMPACT OF DIFFERENTIAL RESPONSE ON CHILD MALTREATMENT RECURRENCE

BY

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DISSERTATION

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ABSTRACT

Differential response is an alternative child protective services (CPS) system that about 25 states in the U.S. have implemented since the 1990s. Evaluation reports have found that DR does not compromise child safety in comparison to traditional CPS approach. However, previous studies have not revealed the process of how differential response (DR) makes an impact on child maltreatment re-report and recurrence. It is also critical to identify the key components of DR and what family changes through service receipt are critical to improve child safety. In this study, I proposed a DR process model that presents pathways from DR to service components, caregivers' service experiences (positive experiences/attitudes and perceived match), and positive family changes to child safety outcomes. The study utilized a random experimental design of the statewide Illinois DR evaluation study and its subgroup of 373 caregivers to test the DR process model with structural equation modeling (SEM). The study utilized both secondary data on child welfare outcomes from the Illinois child welfare system as well as primary data on family changes collected by phone surveys. It appeared that the differential response did not have an impact on child safety. The findings indicated that increased positive service experiences and perceived match predicted a decrease in child maltreatment re-report and recurrence; caseworkers' emotional support is critical to improve families' positive service experiences and perceived matches between services and needs. Families' subjective service experiences and perceived matches appeared to be critical to reduce re-reports and recurrences rather than the DR. Emotional support was important for both positive service experiences and perceived matches that in return reduced re-reports and recurrences regardless of the pathway assignment. Practices and policies that are more family engaging are recommended based on the findings of this study.

To My Parents

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TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

CHAPTER 1

INTRODUCTION

As a family-focused and strengths-based approach for child and family well-being in child welfare, differential response (DR) has been adopted since the 1990s by state governments as an alternative approach to child protective investigations (National Quality Improvement Center on Differential Response in Child Protective Services [QIC DR], 2009; Shusterman, Hollinshead, Fluke, & Yuan, 2005). Called "dual track" or "multiple tracks", DR provides multiple responses to families screened in the child protection system due to alleged child maltreatment according to the risk level. It assigns high-risk families to an investigation pathway due to severe child maltreatment such as serious physical or sexual abuse, or imminent risk for further abuse. It assigns low-to-moderate risk families to a non-investigation pathway. The investigation pathway mandates the collection of evidence to substantiate the maltreatment allegation, just as in the traditional child protective services system. The non-investigation pathway does not make a formal decision regarding the disposition of alleged child maltreatment and the identification of a perpetrator. Instead, it engages families in the process of a needs assessment to decide what to provide for the safety and well-being of children. There are also some jurisdictions that further differentiate one or both of these two pathways.

Although the evaluation reports to date of DR have found that child safety is not compromised and that DR has an overall positive impact on child maltreatment re-report and recurrence (QIC DR, 2009; Shusterman, et al., 2005), they have not explored what underlies DR when it has positive impact on child safety (QIC DR, 2009) and only two studies used a random control experiment (Loman, Filonow, & Siegel, 2010; Loman & Siegel, 2004b). Knowing what

specific components account for specific positive family changes using a rigorous research design is critical to help both policy makers and practitioners to optimize the presumed benefits of DR on the reduction of re-report, recurrence, and out-of-home placement. Based on family stress theory, this study examines specific support types from DR, and families' experiences such as satisfaction and involvement with DR, and investigates whether these aspects lead to families' better coping and adaptation to stressful situations, and the reduction of re-report, recurrence and out-of-home placement. The findings of this study inform both policy makers and practitioners of what components of DR they need to promote to maximize child safety.

The current research utilizes the Pathways to Strengthening and Supporting Families (PSSF), Illinois, DR study. This study examines whether the non-investigation pathway (or the Family Assessment Response pathway in PSSF) provides more services and a timelier meeting with a caseworker, whether needs and services are matched and families have more positive experiences (satisfaction and involvement in decision making) than in a traditional investigation pathway (or the investigation response pathway in PSSF). The study also examines whether these aspects of PSSF lead to positive changes in family functioning, family hardiness, perceived stress and coping at case closure. Family changes, in turn, are examined in the relationship with child maltreatment re-report (screened-in report through a Central State Registry or "hotline"), recurrence (indication or substantiation of the re-reported cases) and out-of-home placement.

This study is based on a subgroup of participants of the state-wide evaluation project of PSSF, conducted by the Children and Family Research Center, School of Social Work, at University of Illinois at Urbana-Champaign. PSSF is funded by the QIC DR as one of the national demonstration sites and has incorporated all of the core elements of DR (QIC DR, 2009) in its program design. The PSSF evaluation project used a random experimental design. In

addition to information drawn from the PSSF evaluation project and administrative data of Illinois CPS, I conducted telephone interviews with a subgroup of participants from the larger PSSF evaluation project in order to obtain primary data.

The findings of this randomized experimental evaluation study shed a significant light on the understanding of what underlies DR regarding its impact on child welfare outcomes. The findings will inform both policy makers and practitioners of what aspects of DR are critical for positive child welfare outcomes. It will also help other prevention services for families at risk of child maltreatment to have effective service components to strengthen families and prevent child maltreatment.

1.1 The Scope of the Problem

In the 2011 fiscal year, 3.4 million child maltreatment cases were referred to child protective services in the United States (U.S. Department of Health & Human Services [US DHHS], 2012). These 3.4 million cases involved 6.2 million children. Among these cases, about 61 % were screened in for investigations and almost 40 % of referrals (39.2 %) were screened out. Even among about 3 millions of unique investigated children, only 23 % (681,000 children) were found to be actual child maltreatment victims (US DHHS, 2012).

This large volume of referrals compared with a relatively small portion of actual maltreatment cases raises the issue of over-inclusion, where too many families are involved in child protective services (CPS) and investigation efforts are wasted for the non-child maltreatment cases (Waldfogel, 1998). Although the majority of screened-in cases do not actually have actual child maltreatment, the investigation is mandatory for all screened-in cases. Besharove and Laumann (1996) stated that for those families who did not actually maltreat their

children, the mandatory reporting and investigation process is unnecessarily intrusive in their lives. Also, considering the limited resources of CPS, investigated cases without any substantiated findings tax the system beyond its capacity. Therefore, the cases that need to be addressed by CPS do not get the necessary attention, due to wasting of resources investing unsubstantiated cases.

While there is criticism of over-inclusion, other people argue that the real issue is under-inclusion. Their logic is that under the current system, low-risk families are dismissed without receiving adequate preventative services while high-risk families go unreported (Waldfogel, 1998). Moreover, the large volume of screened-out cases usually does not receive any further attention from CPS; and even the families screened-in and investigated, do not receive enough support if the findings are not substantiated, which means there is not enough evidence of child maltreatment. Nationally, 30.1 % of non-victims receive post-investigation services, whereas 61.2 % of victims receive mandated services (US DHHS, 2012). This is possibly because non-victims are judged not to have as many needs as victims. However, after cases without sufficient evidence do not get enough further attention and services from CPS, many of these families eventually return to the child welfare system (Drake, Jonson-Reid, Way, & Chung, 2003) with heightened risks and more severe cases of maltreatment. The large volume of re-referred (calls to the State Central Registry or hotline) or re-reported cases (screened-in cases) that was previously unsubstantiated supports the claim that the child welfare system does not include and provide services to as many families as it needs to.

The current national standard of absence of recurrence among children substantiated or indicated during the first 6 months after the first reporting is 94.6 %, as established by the Children's Bureau. In 2007, 49 states in the US met this standard and in 2011, 51 states did, with

only 2 states more than 2007(US DHHS, 2012). A large portion of recurrence cases also consist of unsubstantiated victims. Drake et al. (2003) stated that, in general, unsubstantiated victims and cases have only a slightly lower risk for recidivism, and they comprise a much higher volume of the re-reported cases. In other words, cases investigated but unsubstantiated do not receive services or support that might prevent them from returning to CPS with heightened risks and substantiated child maltreatment.

Thus, the current CPS system does not function effectively for prevention of child maltreatment before the evidence of maltreatment is readily visible and family problems have become severe. Families with unsubstantiated child maltreatment reports need more systematic support to address their problems, which will prevent them from coming into contact with CPS repeatedly.

1.2 Differential Response Approach

To address the criticisms of the current child welfare system, differential response (DR) has been proposed since the early 1990's and implemented by more than a dozen states in the U.S. (Shusterman, et al., 2005) throughout the 90's and the first decade of 21st century (QIC-DR, 2009). Currently, 18 states have adopted DR statewide or partially (QIC-DR, 2009) while others are preparing to implement it.

Called "dual track," "multiple track," or "alternative response", DR allows CPS to respond to families in different ways, depending on the level of risk (Kaplan & Merkel-Holguin, 2008) to prevent future child maltreatment while addressing both over-inclusion and under-inclusion. Under the traditional system, when there is not enough evidence of child maltreatment, the case is unsubstantiated and usually does not receive further attention from CPS. Under DR,

cases found to have no immediate concern for a child's safety, instead of investigation, the family needs are assessed and the family is referred to community organizations for further services. The investigation in the traditional model is reserved for child maltreatment reports where any concerns for child safety exist (Kaplan, & Merkel-Holguin, 2008). Differentiated pathways enable CPS to put different focus and resources on different groups of families more effectively--investigation for high-risk families and more preventive services for low- to moderate-risk families.

Although different states and jurisdictions implement DR in different ways, there are eight core elements that define DR (Merkel-Holguin et al., 2006). First, DR has two or more discrete responses of intervention. Second, multiple different responses are provided to families who are screened in and traditionally were investigated, not those who were screened out. Third, the assignment to different pathways is decided by several factors, such as the presence of imminent danger, level of risk, the number of previous reports, the source of the report, and/or other case characteristics including the type of alleged maltreatment and the age of the alleged victim. Typically, screened-in cases with low- or moderate-risk are assigned to the non-investigation pathway. Fourth, it is possible to change original response assignments based on additional information collected during the investigation or assessment phase. When the risk is higher than originally assessed, the case can be re-assigned to an investigative response pathway and, when the risk is lower, the re-assignment to a non-investigative pathway is possible. Fifth, the multiple responses are officially codified in statute, policy, and/or protocols. Sixth, families who receive a non-investigatory response can accept or refuse the offered services after an assessment without consequences. In other words, services are voluntary in those cases. Seventh, the perpetrators and victims are not identified in a non-investigation pathway, and services are

offered without substantiation or other disposition of child maltreatment. Eighth, the name of alleged perpetrators in the non-investigation pathway is not entered into the central registry. Some other characteristics of DR include family engagement throughout the needs assessment, acceptance of service and other decision-making, and collaboration with community organizations (Merkel-Holguin, Kaplan, & Kwak, 2006).

DR also exemplifies six core values (Kaplan & Merkel-Holguin, 2008). First, as opposed to the adversarial approach of traditional CPS through investigation, DR has a more engaging approach where parents are viewed as partners for child safety. Second, families can be more receptive to and can receive services in a non-accusatory way, resulting in better outcomes. Third, individuals are not labeled as a 'perpetrator'. Rather, they are recognized as being in need of services or support. Fourth, individuals and families in need of services or support are encouraged rather than threatened so that they would be more willing to seek assistance in the future. Fifth, family strengths and needs are identified, instead of an emphasis on punishment. Sixth, as opposed to a one-size-fits-all approach, DR's approach is more customized and tailored, considering risk, safety, protective factors, and other criteria.

Not only does the implementation of specific components of DR varied across states, there are also different names for DR in these states. Although DR in different states shares the same values of family engagement and service provision, there are also different aspects (Kaplan & Merkel-Holguin, 2008; US DHHS, 2005). First, variations of DR implementation are found regarding specific criteria of case assignment: Whereas many states show the tendency for younger children to be assigned to an investigation pathway (US DHHS, 2005), there are states that do not consider child age for pathway assignment. The number of previous CPS reports, exposure to domestic violence, a caregivers' history of drug abuse are also considered as criteria

in some states, but not in other states. Different states weigh precipitating factors differently as criteria (Kaplan & Merkel-Holguin, 2008; US DHHS, 2005). Second, states have both commonalities and differences in the types of maltreatment excluded from an assessment response in the non-investigation pathway (Kaplan & Merkel-Holguin, 2008; US DHHS, 2005). Whereas in all 15 states, sexual abuse and serious physical abuse in which a child's death has been connected to the report cannot be assigned to a non-investigation pathway, criteria for serious neglect, serious mental injury, abandonment, and drug exposed infants are different (Kaplan & Merkel-Holguin, 2008). Some types of maltreatment, such as neglect/medical neglect, and emotional/other/unknown maltreatment type, are more represented among children in the non-investigation pathway (US DHHS, 2005). Third, the amount and length of services and service providers are different (Kaplan & Merkel-Holguin, 2008). Also, certain states could implement DR and provide services with obtained resources, while other states decide to discontinue DR due to a lack of resources in the community (QIC DR, 2009). Fourth, the responses to families who refuse offered services and have moderate risks are different across states. Whereas some states allow families with moderate risk to receive voluntary services, other states mandate services or reassign cases to an investigation pathway (Kaplan & Merkel-Holguin, 2008). Last, there are variations in the level of discretion an individual caseworker has in making significant decisions. A caseworker's description can influence reassignment of a pathway, the use of a non-investigation pathway for families whose children are in substitute care, and the response to family issues that was not originally planned to be addressed. Although there are guidelines to assign cases, many other factors can influence caseworkers' decisions, such as their perceptions of DR and their perceptions of available services in the community (Kaplan & Merkel-Holguin, 2008).

As previously discussed, not all states in the U.S. have adopted this approach and there are great variations in the implementation in different states and counties (Shusterman et al., 2005). However, because the model has been adopted by many states, it needs more research to examine its impact on child welfare outcomes, such as recurrence, and its impact on family, caseworkers, and the CPS system. We need more rigorously designed studies that examine the effectiveness of specific components of DR and the mechanism of its effectiveness in order to optimize the benefits of DR implementation (NQIC, 2009).

Among the more than 10 evaluation studies that currently exist, only the evaluation research studying Minnesota, Ohio pilot project and New York (one county) utilized a randomized experiment, which is the most rigorous research design (Loma et al., 2010; NQIC, 2009). Through assigning families with the same risk randomly either to the non-investigation pathway or investigation pathway, a randomized experiment provides more valid findings on the effectiveness of treatment, which is the non-investigation pathway in this case, compared to other types of research design. In the midst of the need for more randomized experiments studying DR, Illinois' state-wide implementation and its experimental design for evaluation are expected to produce significant findings of the effectiveness of DR. This dissertation study utilized the scale and design of this larger evaluation project. The next section introduces the Pathways to Strengthening and Supporting Families, DR in the State of Illinois.

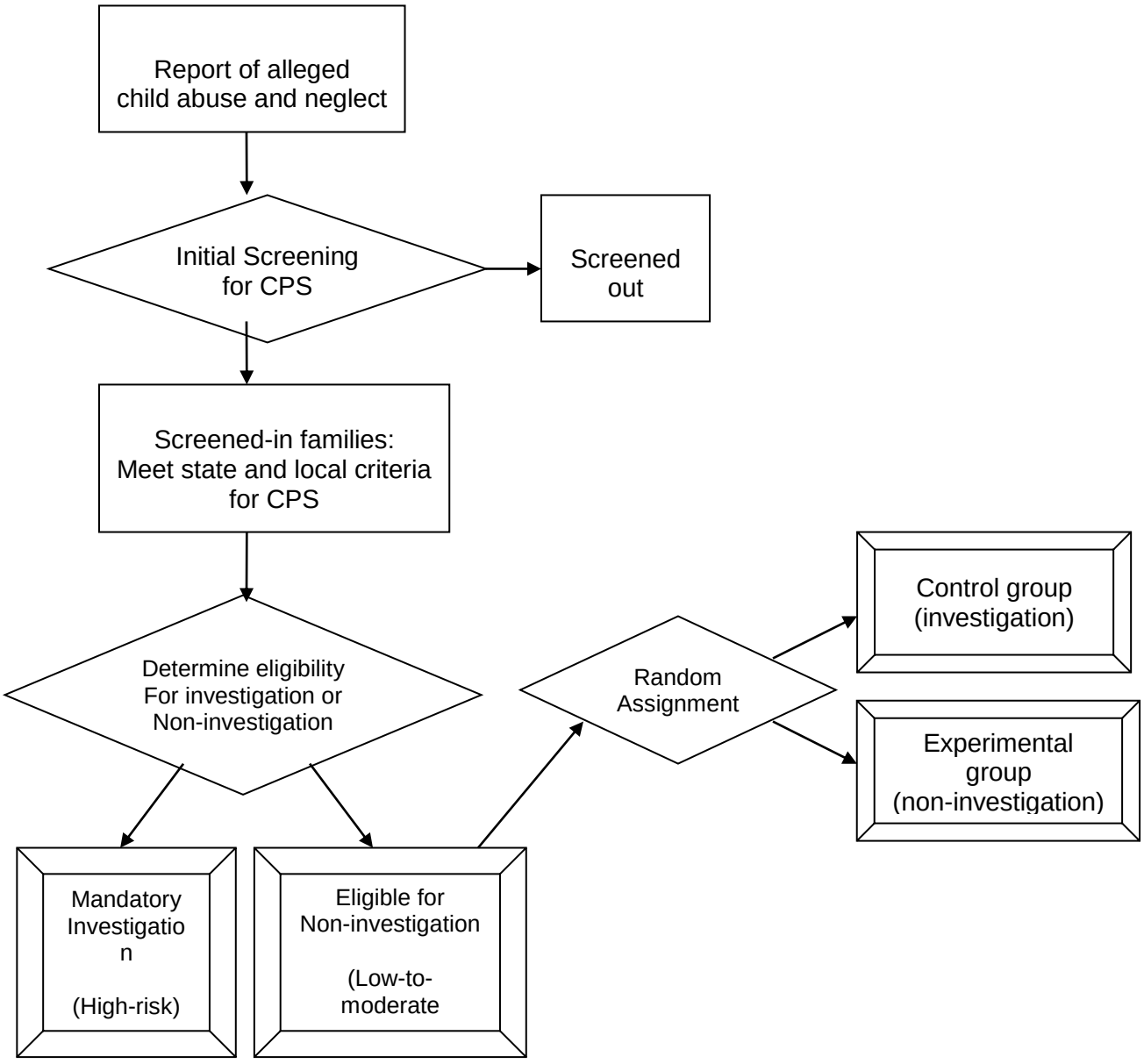
1.3 Pathways to Strengthening and Supporting Families (PSSF)

PSSF is the name for the Illinois Differential Response program. The state of Illinois has one of the largest child welfare systems in the nation. In FY 2009, approximately 258,237 alleged instances of child maltreatment were reported to the Illinois hotline and out of all alleged

cases, 68,737 cases (26.6 %) received investigation. This involved 111,732 children. About 29,785 (26.7 %) of investigated children were indicated for abuse or neglect (Illinois Department of Children and Family Services, 2010). In FY 2011, the rate of absence of recurrence in the Illinois was 93.4 %, lower than the national standard rate of absence of recurrence, 94.6 %. Compared to other states, Illinois CPS provides fewer services to families involved in the system. Among victims, only 45.6% received post-investigation services; and among non-victims, only 12.8 % received services. This is a much lower rate compared to the national average of service provision for victims (61 %) and non-victims (30 %) (US DHHS, 2012). Believing that child welfare outcomes can be improved through engaging families at the earliest possible opportunity, providing needed services, and improving families' social capital and community well-being, the State of Illinois decided to implement DR due to its strength-based, family-centered, and community-involved approach (Illinois Department of Children and Family Services, 2009).

All of the core elements of DR described earlier are implemented in PSSF. After the alleged cases are screened in through the hotline, two pathways are provided according to the level of risk. Figure 1.1 shows the process of track assignment. Families with low to moderate risk are eligible for a non-investigative Family Assessment Response (FAR) pathway, whereas families with high risk are assigned to a traditional investigation response (IR) pathway. For the evaluation of PSSF, families eligible for the FAR pathway are randomly assigned to either the FAR pathway or the IR pathway. All high-risk families are assigned to the investigation pathway and receive a typical investigation. Thus, the purpose of evaluating PSSF is to determine whether the DR pathway is more effective in improving child welfare outcomes among low- to moderate-risk families than the investigation pathway.

Figure 1.1. The process of PSSF pathway assignment



Different states have different criteria of pathway assignment. Illinois' criteria are quite conservative. Low to moderate risk in Illinois is defined as meeting all of the following (IDCFS, 2009):

1. Either no prior family reports to the SCR (hotline); OR no prior indicated allegations of abuse and/or neglect; OR prior indicated reports have been expunged within timeframes ranging from five to fifty years; AND

2. Alleged perpetrators are parents (birth or adoptive), legal guardian, or responsible relative; alleged victims are not currently in IDCFS care or custody or wards of the court; AND

3. Protective custody is not needed or taken; AND

4. Allegations include, singly or in combination:

- Inadequate Food
- Inadequate Shelter
- Inadequate Clothing
- Environmental Neglect
- Mental Injury
- Medical Neglect
- Inadequate Supervision unless the child or children are under the age of 8 or with an emotional/mental functioning of that of a child under the age of 8 and there was no adult present or able to be located or if the adult is present but impaired and unable to supervise.

As seen in the criteria, physical abuse, sexual abuse and serious neglect such as abandonment, inadequate supervision of young children, and medical neglect of disabled infants cannot be assigned to non-investigatory assessment track (IDCFS, 2009).

Once families are assigned to a non-investigation pathway (DR pathway), they are served by a paired team of one DR Specialist from the Illinois Department of Children and Family Services (IDCFS) and one Family Assessment (FA) Caseworker from a private community-based agency. DR Specialists who work with families in the FAR pathway do not work with families in the investigation pathway. They are required to take a special training module on the PSSF approach in addition to other training required by all caseworkers in CPS. The IDCFS DR Specialist assesses the safety during the initial contact. The DR Specialist decides whether reassignment is needed in cases where risk is higher than expected. If the DR Specialist finds no immediate safety concerns, the case is handed over to a FA Caseworker for future services (IDCFS, 2009).

The FA Caseworker assesses family needs and strengths and develops a service plan with the family. The FA Caseworker records family progress and provision of services. The cases

handed over to a FA Caseworker may remain open for a maximum of 90 days. After 90 days, a service extension of 30 days up to 90 days can be added by the agency providing family assessment services based on family needs and the availability of funds and services. Private community agencies are selected from existing local service entities or providers with experiences in serving families in their communities. Selected agencies have a formal Purchase of Service (POS) contract with the DCFS and provide assessment and services to families in a non-investigation track. The PSSF evaluation team acknowledges that a caseworker's personal characteristic as well as organizational and community context have influence on how DR is implemented. In addition to initial training for both public and private workers, there are biannual summits where progress and challenges are shared and reflected upon in order to improve implementation (IDCFS, 2009).

Services provided through the FAR pathway involve a wide array of professional assistance. These services include crisis intervention and short-term intervention to preserve families; referral to needed services including special education, mental health, and Medicare services; parenting training, counseling, therapy, advocacy, homemaker services, day care, and home visitation services for teen parents; cash assistance and in-kind assistance services; advocacy and referral for legal services such as housing, child support enforcement, employment, and education needs; and infant care and parenting education. The FA Caseworker uses the Statewide Provider Database to search the available services for each family and appropriate transportation is provided through using informal support sources in the community. Along with connecting the family to community services organizations, families are also connected to available federal, state, and local formal services when they are eligible. The formal services include TANF, Medicaid, Supplemental Nutrition Assistance, WIC, SSI housing supplements,

subsidized housing, Head Start, Early Head Start and Title XX day care. Informal support resources from extended families and neighbors are also developed and utilized through family meetings and local support groups (IDCFS, 2009).

Families can refuse to receive services without consequences when there are no safety concerns, and can request track changes from non-investigation to investigation. And alleged maltreatment served in the FAR pathway does not receive a disposition decision on substantiation or non-substantiation. Thus, perpetrators are not identified or listed in the system (IDCFS, 2009). The IDCFS is divided into six administrative regions: Cook North, Cook Central, Cook South, Northern, Central, and Southern. The six regions cover rural and urban areas. The three Cook County regions are urban areas (Chicago and surrounding metro areas), the Southern region is mostly rural except for East St. Louis, and the Northern and Central regions are moderately sized cities (IDCFS, 2009).

The implementation of PSSF and its evaluation are expected to make significant impacts on both policy makers who are considering the adoption of DR and those who want to improve DR where it is already implemented. PSSF evaluation utilizes the large scale of statewide implementation and is a random control experiment, the most rigorous evaluation design. Utilizing the PSSF evaluation design, this study goes further by examining relationships between inputs and outcomes of PSSF based on theoretical frameworks. This research thus goes beyond just examining the program's positive impact. More specifically, this study examines four questions, 1) Do families in the experimental group (the DR pathway) receive more tangible, appraisal and emotional support and receive support more quickly than families in the control group (the investigation pathway)?; 2) Do families in the experimental group have more positive service experiences/attitudes and better matches between needs and services than families in the

control group?'; 3) Do more tangible, appraisal and emotional support as well as quicker time to support receipt help explain families' more positive experiences/attitudes and better matches between services and needs?; 4) Do families' more positive service experiences/attitudes and the matches between needs and services help explain improved family functioning, family hardiness, reduced perceived stress, ability to cope at the time of case closure?; and 4) Does improved family functioning, family hardiness, reduced perceived stress, and better ability to cope help explain reduced re-report, recurrence? Questions 1 and 2 will determine whether DR provides more support and leads to more positive experiences/attitudes of families and perceived matches by families served by child protective services systems than the traditional system. Question 3 will determine whether more support and quicker time to support leads to families' more positive experiences/attitudes and better matches. Questions 4 and 5 will determine whether the positive service experiences/attitudes and better matches lead to adaptive family changes and ultimately to positive child welfare outcomes. The findings aim to inform researchers, child welfare agencies, and policy makers of the underlying mechanisms of DR in order to improve the aspects of DR that are critical for child safety improvement.

The empirical research and conceptual frameworks are reviewed in the following chapters.

CHAPTER 2

EMPIRICAL RESEARCH

In this chapter, I will first review the evaluation studies of DR and their impact on re-report, recurrence, and out-of-home placement. Second, I will review studies on predictors of re-report and recurrence under the traditional child welfare system. The focus will be especially on how services provided by CPS affect child welfare outcome. For this, I will also look at additional research on family preservation services, although the main purpose of family preservation services is the prevention of children's out-of-home placement. Third, I will review studies on the effectiveness of a DR-related approach such as family engagement, since a non-adversarial and supportive approach differentiates DR from a traditional investigative CPS approach.

Since DR is a relatively new approach, evaluation studies of DR have focused on whether DR brings positive outcomes related to children and family. In these evaluation studies, there are some factors that are related or appear to contribute to the positive outcomes, which will be reviewed. Regarding the second part of the review, studies on predictors of re-report or re-referral to CPS under the traditional child welfare system are more advanced in that they examined various characteristics or factors of children, caregivers, families, environment, and post-investigation services as predictors of recurrence or re-report. Unfortunately, although some individual or case characteristics appear to be strong predictors of re-report or recurrence, the service variables have been less examined and the effectiveness of services are somewhat mixed. Regarding the third part of the review, studies on an engaging approach in child welfare show

that more empirical studies are needed to understand both the impact and the mechanisms that account for any impacts of this approach.

Reviewing empirical studies of DR evaluation, predictors of recurrence under the traditional child welfare system, and the engaging approach in child welfare informed what specific variables were considered in formulating the research questions that were used to evaluate and understand the effectiveness of PSSF. The limitations of previous studies also provided information on the factors that the current study needed to consider, especially regarding methods and research questions.

2.1 Effectiveness of Differential Response on Re-report and Recurrence

DR evaluation has been conducted more than 20 states as of 2011 (Loman, Filonow, & Siegel, 2010; NQIC, 2011; NQIC, 2009). Evaluation studies vary in many aspects (Arizona Office of the Auditor General [AOAG], 2001; Virginia Department of Social Services [VDSS], 2008; English, Wingard, Marshall, Orme & Orme, 2000; Loman, Filonow, & Siegel, 2010; Loman & Siegel, 2004a; Loman & Siegel, 2004b; Massachusetts Society for the Prevention of Cruelty to Children [MSPCC], 2008; Office of Children's Administration Research [OCAR], 2005; Office of Legislative Auditor [OLA], 1998; Ruppel, Huang, & Haulenbeek, 2011; Siegel & Loman, 2000; The Center for Child and Family Policy [CCFP], 2006; Huebner, Durbin, & Brock, 2009; Merkel-Holguin, Kaplan, & Kwak, 2006). For example, some studies compare demonstration areas, in which multiple responses are provided with control areas in which only one traditional investigation response pathway is provided (e.g. North Carolina, Missouri). Other studies compared families assigned to the non-investigation pathway with those assigned to the investigation pathway (e.g. Arizona, Massachusetts, Minnesota, and Kentucky). To understand

the impact of DR on recidivism, some studies examined re-accepted cases (re-report) (e.g. Minnesota, New York, North Carolina, Ohio) whereas other studies examined re-referrals to a hotline (e.g. Massachusetts, Missouri, Kentucky). Designs of studies are also different. Only three state studies, Minnesota's, New York's and Ohio's pilot study, used an experimental design, while other studies had less rigorous designs (Loman et al., 2010; NQIC, 2009). Evaluation studies have included various aspects of DR: The outcomes of children and families (outcome evaluation); the process regarding whether DR was implemented as intended and the response of workers in CPS agencies and community service organizations (process evaluation); and the cost effectiveness of DR examined in Minnesota and Ohio evaluation studies (cost analysis).

Overall findings from different evaluation reports conclude that DR does not compromise the safety of children and the rate of recurrence is reduced or, at least, stays the same in comparison with traditional child welfare systems (Loman et al., 2010; NQIC 2011; NQIC, 2009). Regarding families, studies are more equivocal in reporting better engagement, satisfaction, and other family improvement outcomes (AOAG, 2001; VDSS, 2008; English, et al., 2000; Loman et al., 2010; Loman & Siegel, 2004a; Loman & Siegel, 2004b; MSPCC, 2008; OCAR, 2005; OLA, 1998; Siegel & Loman, 2000; CCFP, 2006; Huebner, et al., 2009; Merkel-Holguin, et al., 2006). The findings of three child welfare outcomes – re-report (screened in CPS re-report), recurrence (substantiated re-report), and out-of-home placement – are reviewed below, followed by findings related to child welfare outcomes.

States vary in their findings of the impact of DR on child welfare outcomes. Some evaluation studies found that DR reduced re-referrals (all alleged re-report to CPS) or re-reports (screened-in CPS report) (e.g., Minnesota, Missouri, Massachusetts, West Virginia) whereas other studies found no significant impact (e.g., Arizona, Kentucky, New York, North Carolina,

Ohio, Texas, Washington) (AOAG, 2001; VDSS, 2008; English, et al., 2000; Loman et al., 2010; Loman & Siegel, 2004a; Loman & Siegel, 2004b; MSPCC, 2008; OCAR, 2005; OLA, 1998; Siegel & Loman, 2000; CCFP, 2006; Huebner, et al., 2009; Merkel-Holguin, et al., 2006). In general, these studies indicate that DR does not increase re-referrals or re-reports compared with the traditional system. However, only Minnesota's evaluation and Ohio's pilot project as well as New York's evaluation used a randomized experimental design, and the studies did not find any difference between pathways (New York, Ohio) or found a reduction of re-reports among families in the non-investigation pathway (Minnesota). On the other hand, a review study pointed out that although there was a significant reduction of re-reports (subsequent screened-in CPS reports) or recurrence (substantiated re-reports) in many states that implemented DR, the reduction rate was small (NQIC, 2009).

Regarding recurrence, fewer states examined substantiation of re-referred or re-reported cases in their evaluation studies. Minnesota's study found that because of a significantly lower rate of re-reports, the rate of recurrence among families placed on the non-investigation pathway was also lower compared with the rate of recurrence among families in the investigation pathway. However, the rate of recurrence among only re-reported cases was not significantly different between the non-investigation pathway and the investigation pathway or between families who received services and those who did not. In Kentucky, although there was not a significant difference in the rate of re-reports between cases in the non-investigation pathway and the investigation track, the substantiation rates of re-reported cases were significantly higher for cases initially assigned to the investigation pathway (Huebner, et al., 2009). In Virginia, families who addressed their needs through services had a lower recurrence rate than those who addressed their needs only partially (VDSS, 2008).

Regarding out-of-home placements, Minnesota's evaluation found that families in the non-investigation pathway were significantly less likely to have their children removed and placed out-of home during re-reported cases. The length of placement was longer for families in the non-investigation pathway because, according to the authors, the DR approach prevented less severe cases that could have short period of placement (Loman & Siegel, 2004b). In Ohio, not as many children in the non-investigation pathway were placed out-of-home compared with those in the comparison group using the investigation pathway (Loman et al., 2010). In Missouri, pilot areas and comparison areas did not have any significant difference in the rate of out-of-home placements (Siegel & Loman, 2000). For the five year follow-up period in Missouri, more children in the demonstration area were placed in out-of-home care than those in the control areas, especially among families with low-to moderate risks at the initial incident (Loman & Siegel, 2004a).

Although evaluations were not focused on identifying predictors of recurrence, there are some factors which seem to be important to child safety. Some factors were unique to DR, and others were related to family and case characteristics. First, it seems that more services receipt prevents re-report. Utilizing a random control experiment (RCT), Minnesota's evaluation study reported that over twice as many families in the non-investigation pathway had case management workgroups. This suggests that there was more service provision and receipt in the non-investigation pathway compared with the investigation pathway. The Ohio pilot project evaluation, another study utilizing a RCT, reported that families in the DR pathway received more poverty-related services and referrals to counseling and mental health services than those on the investigation pathway. In Massachusetts, families who completed service participation in the non-investigation pathway were one-third less likely to have a re-referral compared to those

in the investigation pathway. Moreover, 96 % of family needs for child care were met, and over 60% of parents and over 80% of children needing mental health services received treatment in the non-investigation pathway (MSPCC, 2008). In North Carolina, although the re-report rate was not significantly different between the two pathways, in both pathways families who received more services were less likely to have re-reports within 6 months than families who received less services (CCFP, 2006). Similarly, an evaluation study in Arizona showed that there was no difference of re-report rate between two tracks, and that the families in the non-investigation pathway who declined to accept services had a similar rate of recidivism to families on the investigation pathway. However, when they participated in the necessary services, these families showed less recidivism than families in the investigation pathway (Merkel-Holguin et al., 2009).

Services, especially tangible services, seem to be an important factor that distinguishes the DR pathway from the investigation pathway. In Minnesota, the types of services offered to families in the DR pathway were broader than what families in the investigation pathway received. Especially, they received significantly more services for basic household and financial needs such as food, clothing, home repairs, help paying utilities, and help in finding a job (Loman & Siegel, 2004b). This was also found in an Ohio evaluation study (Loman et al., 2010). In Missouri, families on the non-investigation pathway received more services for basic needs such as food, clothing, shelter, and medical care even though those types of services were distributed on both the non-investigation and investigation pathways. Families on the non-investigation pathway received services more quickly than families on the investigation pathway (Siegel & Loman, 2000). Across different states, the services offered also appear to vary. In Massachusetts, services included home visiting, parent education, mental health screening and

treatment, and concrete community supports (MSPCC, 2008). In Arizona, services included parenting counseling, child daycare, transportation, food, clothing, and rent assistance (AOAG, 2001).

Second, family engagement through a non-adversarial approach or a worker-family relationship beyond service provision appears to have an influence on re-reports. Interestingly, the Minnesota evaluation found that the DR approach reduced re-report rate whether or not services were provided, but when services were provided, families were less likely to be re-reported than those who received services in the traditional track. In Minnesota and Ohio, workers reported that families in the non-investigation pathway were more cooperative and active in case planning and in the decision making process compared with families on the investigation pathway (Loman et al., 2010; Loman & Siegal, 2004b). In Missouri, workers in the pilot study area where two tracks were offered expressed more satisfaction with the CPS system (Siegel & Loman, 2000). The Minnesota evaluation study found no relationship between the number of workers' logged direct and collateral contacts and the re-reports. However, the researchers stated that this might be due to the lack of specific information on workers' activity (Loman, & Siegel, 2004a).

Third, family satisfaction with both services and the approach appears to be an important difference between the non-investigation and the investigation pathway. This finding is also related to family engagement and worker-family relationship. In Minnesota and Ohio, families on the non-investigation pathway who received services were more likely to report satisfaction with the types of services and the way they were treated than families on the investigation pathway who received services (Loman et al., 2010; Loman & Siegal, 2004b). This was also true in Missouri, where families on the non-investigation pathway were more likely to report that

they were satisfied with the help and the way they were treated. Those families were also more likely to report that their children were better off because of CPS involvement (Siegel & Loman, 1997). In North Carolina, the majority of families in the pilot counties that implemented DR reported that they were treated with respect and received the services they needed (CCFP, 2006).

Fourth, families also showed more improvement in their function and reduction in the risk of child maltreatment. In Minnesota, families were less likely to report that they have drug abuse and domestic violence problems one year after their last contact with CPS, were more likely to report that they and their children are doing better after two years, and were less likely to report that they have stressful relationships with other adults and household-related stress. The families on the non-investigation pathway also reported that they have increased income compared with control families or families on the non-investigation pathway without service receipt (Loman, & Siegel, 2004b). In Massachusetts, among families who received services in the non-investigation pathway, many parents with a high level of distress showed significant reduction in their distress level. The majority of parents with high risk of child maltreatment due to their parenting skills and attitudes also showed significant improvement (MSPCC, 2008). In Arizona, families on the non-investigation pathway showed a significantly reduced risk of child maltreatment (AOAG, 2001). In North Carolina, families reported their parenting skills improved and they came to know whom to contact in the community in times of need (CCFP, 2006).

Fifth, the risks of child maltreatment families had were related to the re-report. In Minnesota, it was found that regardless of track assignment and service receipt, families with previous CPS involvement had a significantly higher re-report rate, although those on the non-investigation pathway had a reduced overall rate of re-report. However, in Missouri, having a

substantiated initial report did not predict re-referral (Siegel & Loma, 1997). Instead, in Missouri's five-year follow-up study, the difference in re-referral was larger between low-risk and high-risk families than between the demonstration area and the control area (Loman & Siegel, 2004a). In other words, risk level was a stronger predictor of re-referral than any other child and family characteristics. In Virginia, high-risk families had a higher rate of re-referral (VDSS, 2008).

Sixth, similar to the fifth point, the types of family problems or difficulties appear to be related to the rate of re-reports. It seems that DR serves the poorest population in child welfare more effectively than other groups of families (Loman et al., 2010). In Missouri, families with three or more children on the non-investigation pathway had a significantly lower rate of re-referral compared with those on the investigation pathway, especially in three areas – lack of proper care, lack of proper concern for education, and lack of basic necessities. Families with three or more children tended to be more financially stressed and had other problems. It seems that offering a non-investigation pathway had the greatest impact on the poorest population in the child welfare system (Siegel & Loman, 2000).

Although not every state reported the previously discussed factors as being related to re-referrals and re-reports, it seems that findings from the rigorous Minnesota study and other studies that comprehensively examined relevant factors provides useful tips for formulating future research questions to examine the effectiveness of DR and its mechanism. Service receipt, the non-adversarial DR approach, family satisfaction, and a more positive and cooperative relationship between caseworkers and families seem to differentiate the non-investigation pathway from the traditional investigation pathway. However, family and case characteristics, such as existing family risks and previous CPS involvement, still appear to be associated with re-

reports or re-referrals. Also, the poorest members of the population seem to be served better through DR. Possibly, part of the reason is that this program provides more tangible assistance than does the traditional child welfare system. Family change and improvement also seem to be associated with a reduction of re-reports or referrals among families on the non-investigation pathway. The specific type of services or matching services and needs also might be important since providing material assistance appears to be effective and DR was effective in helping families in poverty.

Evaluation reports also showed that there is a great variation in implementing DR. In states where no significant difference was found in re-reports between the two pathways, it seems that the non-investigation pathway was not implemented in an optimal way. For example, in Arizona, only one-third of families referred to the non-investigation pathway accepted services, and there was significant difference of re-reports among families who accepted and completed the provided service programs than those who did not complete those programs (AOAG, 2001). In Kentucky's process evaluation, inconsistency in implementation was found across different regions. The investigation pathway had a large portion of low-risk families and the non-investigation pathway still had high-risk families (Huebner, et al., 2009). By contrast, in states where families on the non-investigation pathway had lower recurrence, it was clear that they received more services than control families who were on the investigation pathway (e.g. Minnesota, Missouri).

Only the Minnesota, New York and Ohio evaluation studies were designed with RCT. Considering how DR is implemented differently across states and the lack of studies with a rigorous research design, this evaluation study of Illinois PSSF significantly contributes to the understanding of the impact of DR on re-report, recurrence, and out-of-home placements because

it used RCT. Also, examining specific components of PSSF and characteristics of families, this study will reveal the mechanism of how DR works.

2.2 Predictors of Re-report and Recurrence under the Traditional Child Welfare System

Studies of child maltreatment recurrence are more advanced than DR evaluation studies in terms of using various factors at different ecological systems as predictors of recurrence. Factors related to individual children and caregivers, families, cases, environment, and provided services were examined to predict recurrence. Unfortunately, these studies have revealed clearer relationships between recurrence and non-modifiable child, caregiver, case, and family characteristics, compared with inconclusive or even negative relationships between recurrence and provided services. In this section, I will review individual and case characteristics first and then service characteristics later. The limitations of previous studies and suggestions for future studies are also discussed. A discussion of limitations and suggestions related to service-related research is also provided by a few studies on family preservation services that examined specific components of service and its impact on child maltreatment recurrence as well as out-of-home placements.

The methods used in different studies on recurrence vary, making comparisons among the studies difficult. For example, studies had differing follow-up periods, sample characteristics, analysis methods and definitions of recurrence (Defanfill & Zuravin, 1998). The follow-up period ranged from less than 2 years (Casanueva, Martin, & Runyan, 2009; Connell, Bergeron, Katz, Saunders, & Tebes, 2007; English, Marshall, Brummel & Orme, 1999; Fuller, Wells, & Cotton, 2001; Fuller & Wells, 2003), 2 years to less than 4 years (Fluke, Yuan, & Edwards, 1999; Fluke, Shusterman, Hollinshead, & Yuan, 2008; Lipien & Forthofer, 2004), to 4 years or more

(Bae, Solomon, & Gelles, 2009; DePanfilis & Zuravin, 1999a; DePanfilis & Zuravin, 1999b; DePanfilis & Zuravin, 2002; Drake, Jonson-Reid & Sapokaite, 2006; Drake, Johns-Reid, Way, & Chung, 2003; Fryer & Miyoshi, 1994). Some studies included all investigated cases at the index report and examined whether there was re-report (screened-in for investigation) and recurrence (substantiation of re-reported cases) (Drake et al., 2003; Fluke et al., 2008), whereas others included only substantiated (or indicated) cases at the index report and whether there was recurrence (Bae et al., 2009; DePanfilis & Zuravin, 1999a; DePanfilis & Zuravin, 1999b; Fryer & Miyoshi, 1994; Fuller, et al., 2001). Other studies looked at only recurrence among all investigated cases initially (Drake et al., 2006; Lipien & Forthofer, 2004), while others excluded cases with out-of-home placements during the initial investigation (Connell et al., 2007) or looked at only re-referrals (hotline calls) among all investigated cases during the initial reporting (Casanueva et al. 2009; Connell et al., 2007; English et al., 1999; Thomson & Wiley, 2009). In one study, two different samples were used to look at different outcomes -- all initially reported cases for re-referral and only substantiated cases for recurrence (English, Marshall, Brummel, & Orme, 1999). Fuller and Wells (2003) examined only cases with alcohol and other drug involvement (2003). Most recent studies used survival analysis, but older studies used different methods. Despite the variations in methods, there are some factors found to be more commonly associated with re-referral, re-report, and recurrence than other factors. Children, caregivers, families, environment, and service characteristics have been examined in previous studies to predict recurrence, re-referral, and re-report.

Although age categories varied, child-level factors showed that younger children had a significantly higher risk of re-report or recurrence than older children (Bae et al., 2009; DePanfilis & Zuravin, 2002; Drake et al. 2003; English et al., 1999; Fluke et al., 2008; Fryer &

Miyoshi, 1994; Lipien & Forthofer, 2004). Findings on ethnicity are mixed, with some studies findings that being White (Fluke et al., 2008; Lipien & Forthofer, 2004), Native American, (English et al., 1999) or mixed race (Fluke et al., 2008) predicted a higher rate of re-report or recurrence. Findings on gender and the risk of recurrence or re-report also are not conclusive. There are only a few studies that found being female (Fluke et al., 2008) predicted a more significant risk of physical abuse recurrence (Fryer & Miyoshi, 1994). The disability of children was found to be associated with increased risk of re-referral or recurrence (Fluke et al., 2008). Child vulnerability that considered age, mental health problem, and developmental problem was associated with a higher likelihood of recurrence (Defanfilis, & Zuravin, 1999b).

Regarding caregiver and family-level factors, studies found that many factors were related to re-referral, re-report, and recurrence. They included domestic violence (Casanueva et al., 2009; DePanfilis & Zuravin, 1999b; English et al., 1999), history of maltreatment during childhood (Casanueva, et al., 2009; English et al., 1999), alcohol or drug abuse (English et al., 1999; Fluke et al., 2008), family stress (DePanfilis & Zuravin, 1999b; DePanfilis & Zuravin, 2002), high assessed risk for a caregivers' criminal behavior (Fuller & Wells, 2003), social support deficits (DePanfilis & Zuravin, 1999b; DePanfilis & Zuravin, 2002), caregiver impairment (English et al., 1999) or multiple problems (Fuller et al., 2001), single parent status (Fuller et al., 2001; Fuller & Wells, 2003), and financial difficulties (Drake et al., 2003). Bae, Solomon, and Gelles (2009) examined multiple recurrence cases and found that younger ages of victims, having a single-parent mother or a stepparent, and large family sizes were significant predictors compared with single recurrence or no recurrence case.

Regarding case related factors, maltreatment by parents (Drake et al., 2003), substantiation (or indication) of a previous report (Fuller et al., 2001; Lipien & Forthofer, 2004;

Thomson & Wiley, 2009), neglect (Defanfills & Zuravin, 1999; Lipien & Forthofer, 2004) or physical neglect, having an anonymous referent, and emergent response time (English et al., 1999) were all predictors of re-referral or recurrence. However, Thomson and Wiley (2009) also found that physical abuse and sexual abuse was a significant predictor of re-referral. Bae, Solomon, and Gelles (2009) found that being reported by a non-mandatory reporter predicted multiple recurrences. Connell et al. (2007) also found that substantiation of index reporting predicted a less likelihood of re-referral, except in cases of substantiated physical maltreatment, which predicted higher re-referral rates.

Regarding environmental factors, Drake et al. (2006) found that the median household income according to census tracks was significantly associated with child maltreatment recurrence, whereas instability of residence was not associated with recurrence. The finding on the median household income and recurrence was consistent with other studies that found poverty in the community as a predictor of re-referral, re-report, or out-of-home placements in recurrent cases (Drake at al., 2003; Way, Chung, Jonson-Reid, & Drake, 2001)

While some factors related to children, caregivers, families, and environment appear to have a relationship with recurrence, service-related factors provide less conclusive findings. Also, previous studies paid less attention to factors related to intervention or services compared with individual and family characteristics (DePanfilis & Zuravin, 2002). Among studies that examined service characteristics, several studies found that post-investigation service receipt was associated with a higher level of recurrence (Barth, Gibbons, & Guo, 2006; Fluke et al, 1999; Lipien & Forthofer, 2004). For example, Lipien and Forthofer (2004) found that the receipt of short-term services and in-home services predicted a higher risk of recurrence compared with children with no ongoing services or foster care services. Short-term services included referrals

to community support services and juvenile justice, and in-home services included court-ordered protective services, voluntary family services, intensive crisis counseling, and the Family Builders program. This might be because higher risk case received services but services were not effective to reduce the risk (Fluke et al., 2008).

On the other hand, in some studies, post-investigation service receipt reduced the risk of re-report or recurrence for subgroups of families involved in CPS, when the interaction effect was considered. Fluke et al. (2008) found that when an interaction effect between victimization and post-investigation service receipt was entered, victims with post-investigation services had a reduced risk of re-reporting and substantiation of re-reporting. However, in the same model, the receipt of post-investigation services and being in foster care had a main effect on a higher risk of re-reporting and a substantiation of re-reporting. Drake et al. (2003) also found an interaction effect where substantiated cases with received services have a reduced risk of re-reporting, substantiation of re-reported case, and out-of-home placement of re-reported cases than those without services, especially for neglect cases. Still, the interaction effect of lowering risk of recurrence cannot be conclusive due to inconsistent findings. Connell et al. (2007) found that post-investigation service was not associated with the risk of re-referral (subsequent hotline call) as a main effect, but found that post-investigation service had an interaction effect with substantiation on the risk of re-referral. When services were provided for substantiated cases, the risk of re-referral significantly increased. English et al. (1999) found that families with out-of-home placements and subsequent reunification had higher rates of re-referral. Fluke et al. (2008) also found that out-of-home placement was associated with increased re-report (screened-in CPS reports) or recurrence (substantiated re-reports). DePanfilis and Zuravin (2002) examined how service-related characteristics, such as the number of in-person caseworker contacts and the

number of CPS caseworkers involved with the family, predicted recurrence. However, they found that only family attendance at services predicted recurrence for 5 years after the index report. Bae et al. (2009) found that fewer contacts by CPS workers, less intensive investigation, and being served less intrusively by CPS were also associated with multiple recurrences.

Compared with individual- and family-level predictors, less is known about service-related variables that can predict recurrence. This can be because of the complexity of service provision, service receipt, family problems and re-reports, and its substantiation process. For example, Fluke et al. (2008) suggested several interpretations on the seemingly high recurrence rate among families who received services. First, they stated that families who receive the services can be intrinsically at greater risks. That is, greater risks families have at case opening lead them to receive more services from CPS, and the risks and problems remain high after service receipt, leading to re-report or recurrence. Second, just providing services might not be effective in reducing family risks. If the services are effective, the risk level of service recipients should be reduced to a level as low as that of families who do not receive services or receive fewer services. However, the fact that service recipients have a higher likelihood of recurrence implies that services are not effective. Third, the reason for recurrence among families who receive services but do not necessarily have higher risks than other families, can be attributed to surveillance bias. Families who receive services are under more surveillance and this can lead to more re-reports or recurrence among these families (Fluke et al., 2008).

The higher risk and higher recurrence rate hypothesis is supported by other studies, including the study by Drake et al. (2006). In their study of re-referrals to CPS and families' involvement in other public services, they found that there was a lower re-referral rate of families who permanently exited from the Aid for Families With Dependent Children (AFDC) and of

families with less intensive in-home services. A higher re-referral rate was found for caregivers with a Medicaid mental health/substance abuse treatment history and for children with emotional disturbances and eligibility for special education. More problems and more services provided for these problems appear to be associated with higher re-referrals. Surveillance bias is also supported by positive relationship between families' social service involvement and recurrence. However, a study by Barth et al. (2006) showed an interesting result that does not support the hypothesis of higher risk and more services. Controlling for the pre-exiting risk of families who received substance abuse treatment through propensity score matching, it was found that service receipt still predicted higher level of recurrence. Although propensity score matching cannot replace a random experimental design through which characteristics of both treatment and control group can be equal, the finding of Barth et al. (2006) seems to show a possibly more complex relationship between service receipt and recurrence.

While studies indicate that some factors of children, caregivers, and family are clearly associated with recurrence, relatively little is known about environmental and service factors. It appears that child, caregiver, family, and case factors need to be considered even when studies examine what intervention or environment factors are associated with recurrence. This is consistent with the findings of the DR evaluation studies that some exiting family and case characteristics, such as previous CPS involvement and family risk, appear to be associated with child welfare outcomes. Another lesson can be that because previous studies examined only whether certain services such as in-home services were provided or not, the effectiveness of specific types of services might have not been well established. Future studies can examine the specific components of services and their effectiveness on specific family problems. In DR evaluation studies, on the contrary, material support appears to be what families need and

providing it improved the living conditions of families in poverty and reduced child maltreatment recurrence of those families. Considering both points mentioned here, it seems that studies need to take into account both child, family, and case characteristics, and specific service components to understand the service effect on the outcomes more clearly.

A few studies on Family Preservation Services (FPS) are more advanced in this aspect, since they examined what specific components have an impact on child welfare outcomes, including recurrence and out-of-home placement. These studies examined specific characteristics of services beyond simply looking at the overall program effectiveness (Littell, 1997; Littell & Shuerman, 2002; Ryan, & Schuerman, 2004).

Littell (1997) examined relationships between case characteristics, service characteristics, and case outcomes. The results showed that the duration of services, intensity of contact with the caseworker, and the number of concrete services had little overall impact on out-of-home placement, subsequent child maltreatment, or the closing of cases in the child welfare system. The intensity of contact with a caseworker showed a weak relationship with increased reports of subsequent maltreatment and out-of-home placement. Littell (1997) also found that certain case characteristics – such as the chronic nature of child abuse and neglect, history of out-of-home placement, and problems of housing, alcohol and cocaine, and adult mental health – were all related to the risk of child maltreatment recurrence and out-of-home placement. There were also some other case characteristics not related to case outcome, such as poverty, health problems of children, teenage parenthood, and household structure. The author stated that despite the efforts in statistical analysis to separate case characteristics and service characteristics, the methods were insufficient to control the variation in service delivery related to case characteristics. The author also suggested that there might have been other important variables not included in the

model, such as the quality of relationship between a caseworker and a family, because substantial proportion of variance in the outcomes were not explained by case and service characteristics.

Littell and Schuerman (2002) examined the impact of the duration of FPS, intensity of contact with the caseworker, the number of concrete services, and specific types of services in FPS on child out-of-home placement and child maltreatment recurrence. Subgroups were created hierarchically by first looking at whether a family had a history of cocaine abuse or inadequate housing problem, and then, if not, whether they had mental health problems and childcare skill deficits. The effect of selected service characteristics on outcomes within subgroups was not related to the likelihood of subsequent maltreatment. The duration, the intensity, and the number of concrete services were also not related to out-of-home placements, subsequent child maltreatment, and case closing (Littell & Schuerman, 2002). The study of Littell and Shuerman (2002) added a subgroup aspect to the similar methods and variables in Littell's (1997) study. Although Littell and Shuerman (2002) looked at the relationship between different types of services and the outcome of different subgroups, they stated that their study had limited information on the fit between family problems and the types of specific services provided by FPS. They suggested that future studies have more detailed information on family problems, family engagement and their relationship with service providers, and the context of service provision and receipt outside of the family, because these factors might be explain the complex mechanisms between services and family outcome.

Ryan and Schuerman (2004) examined whether services related to problems of paying bills through FPS change family functioning, child maltreatment recurrence, and out-of-home placement. Family problems focused on the difficulties of paying monthly bills, such as housing and electricity. Concrete services included emergency cash assistance, purchasing food, housing

assistance, and the provision of clothing, furniture, and supplies. Clinical services included money management. Few services were related to changes in how families function on a daily basis, which was measured through having difficulties in paying bills and buying food or clothes. However, provision of clothing, furniture, and supplies as well as housing assistance was related to a reduced risk of subsequent child maltreatment. Cash assistance and the provision of clothing, furniture, and supplies were associated with a decreased likelihood of substitute care placement. But the authors pointed out that it is not known whether the services really met the needs of those families because information on how services were provided was not available, and families still had the same problem in paying bills. Caseworkers might have provided the services related to paying bill to improve their relationship with families, and families could have bigger underlying problems, such as substance abuse and long-time unemployment, which resulted in struggles to pay monthly bills.

Although research on FPS is advanced in that it has examined specific components of services and family needs or problems, the researchers pointed out that their understanding of family needs or problems and family changes through services are limited. In other words, it is not known whether family problems and needs were addressed by services, and how families changed through those services. How other service-related aspects, such as the worker-client relationship affect service effectiveness need to be considered in order more clearly to understand the relationship between services and child welfare outcomes. It seems that both recurrence and FPS studies were not very successful in revealing the effectiveness of provided services and the mechanisms through which they work. The complexity involved in service provision, family change, and the CPS report and substantiation process seems to suggest that future research needs to examine more specified components of this complex process.

Considering how critical it is to understand what service is working and how it is working to inform both practice and policy in child welfare, these inconclusive findings should not discourage further research but should be a platform to develop future studies.

The reviewed studies on recurrence and FPS also have another limitation in that they did not pay enough attention to family changes after the service receipt. Although Ryan and Schuerman (2004) examined improvements in family functioning, the study was limited in looking at whether they had difficulties in paying bills and buying food or clothes after services were rendered. The authors pointed out that some unmeasured family function might have been improved. In contrast to DR evaluation studies, studies on recurrence using traditional child welfare services have not examined the reduction of family problems and how a family functions after service receipt. They also did not look at the way families received and perceived the services through variables such as family satisfaction and cooperation. This is probably, in part, because of the lack of available data on these factors, considering that most recurrence studies use administrative data from the child welfare system.

Although there are few recurrence studies in peer-reviewed journals that examined the relationship between family attitude or improvement and child welfare outcomes, DePanfilis and Zuravin (2002) examined the level of cooperation and the level of problem resolution. For studying the level of cooperation, family service attendance and perpetrator admittance of index maltreatment were examined, leading to the conclusion that family service attendance predicted a lower rate of recurrence. Other variables–such as the level of cooperation during intake and the continuation of CPS service, resistance of mothers during continuing services, services not used or refused by mothers–were not used because they performed poorly in the analysis models. Regarding problem resolution, the variable of the percentage of problems with some

improvement at the time of closure was constructed and examined, but was found not to be a significant predictor of recurrence. On the other hand, child vulnerability, family stress, and social support were again found as significant predictors.

A DR pathway provides services differently from a traditional investigation track. A DR pathway provides more services to low-risk families. Also, it provides families with services in a different manner. As seen through the findings from DR evaluation studies, family satisfaction and engagement of families in the non-investigation pathway was more positive than those families in the investigation pathway. Even though previous research has not paid enough attention to family change or attitude-related factors such as engagement, satisfaction, and improvement in family functioning during and after service receipt from CPS, there are some related studies from which lessons can be learned. The next section will review studies on family engagement as the DR approach and positive outcomes.

2.3 The DR Approach and Child Welfare Outcomes

DR is non-adversarial and supportive since it does not identify perpetrators and does not rely on investigation. Also, through engaging families in the service planning stage and the decision making process, DR emphasizes a more responsive form of support based on a comprehensive family assessment. Families participate in services on a voluntary basis and caseworkers focus more on family strengths instead of family deficits. This section is intended to review studies on the effectiveness of such an approach.

Caregivers involved in child welfare respond differently to caseworkers depending on how they perceive their relationship with caseworkers and the way power is used. When caregivers perceive that the caseworker uses power ‘over’ them, they resist or pretend to

cooperate. On the other hand, when caregivers perceive power is used 'with' them to support and advocate for them, they are more willing to cooperate with the caseworker (Dumbrill, 2006). Client engagement or participation is widely recognized as positively affecting outcomes, but an empirical understanding of its impact on outcomes and the process of engagement and further client changes has been limited (Altman, 2005). This limitation is partially attributed to inconsistent definitions and measures (Littell, Alexander, & Reynolds, 2001; Yatchmenoff, 2005).

However, there are some studies on child welfare that show the positive impact of engagement on some outcomes. Littell (1999) found that in FPS, caregivers' collaboration with caseworkers in treatment planning and agreement with treatment plans were related to better compliance with program expectations, controlling for case characteristics and service duration. Compliance, in turn, predicted a significantly less likelihood of subsequent child maltreatment and out-of-home placement. Compliance was measured through keeping appointments, completing tasks, and cooperation. Littell and Girvin (2005) examined the relationships between caregivers' recognition of problems, their intention to change and overall readiness to change, and child welfare outcome, such as re-report of child maltreatment, substantiation of re-report, and out-of-home placement after in-home services. They found that caregivers' intentions to change predicted a reduction of subsequent child maltreatment and the substantiation of subsequent maltreatment report. Parents' intention to change was also related to some improvements in family functioning, such as a reduction in housing problems, an increase in network size, and increased positive life events. Problem recognition predicted only re-reports of child maltreatment and the readiness for change predicted only a reduction in out-of-home placement.

In psychotherapy, the concept of a working alliance– defined as the collaboration between therapist and client and the two having the capacity to negotiate the conditions of therapy–was found to be related to therapy outcomes in a meta-analysis of the previous studies (Horvath and Symonds, 1991). A positive working alliance was related to positive therapy outcomes. Interestingly, when the quality of a working alliance was assessed by clients, it was most predictive of treatment outcomes and was least predictive when therapists' assessments were used. Also, the type of therapy and the length of treatment were related to the relationship between the therapist-client working alliance and outcome.

Surprisingly little is known about how, when, and why family engagement happens and how it alters the change process (Altman, 2005). Littell and Tajima (2000) examined the factors that predict better collaboration in treatment planning and compliance with program expectations among families served in FPS. Collaboration was conceptualized as client participation in both treatment planning and agreement with treatment plans. Compliance was conceptualized as behaviors such as keeping appointments, completing tasks, and cooperating with caseworkers and others. Predictors were tested at case, worker, and program levels. Although case characteristics, such as the severity of problems, accounted for more variances of collaboration and compliance, the characteristics of caseworkers were also associated with collaboration and compliance. A caseworker's deficit orientation and burnout predicted lower levels of collaboration whereas being African-American, having adequate supervision, and job clarity were all associated with greater collaboration. However, a deficit orientation appears to obtain better compliances from caregivers with prior court involvement. Programs with small caseloads, advocacy, and counseling services predicted higher levels of compliance. Adequate supervision and autonomy were also related to greater compliance of caregivers, whereas workers' deficit

orientation predicted lower levels of compliance. Chapman, Gibbons, Barth, McCrae, and the NSCAW research group (2003) examined what predicts the relationship quality between child welfare workers and caregivers who received in-home services. Relationship quality was measured by focusing on the frequency with which caseworkers explained service options, listened to and understood caregivers, and involved caregivers in an action plan, and the degree to which caregivers were given respect. Working with two or more workers, not being offered the needed services, and not being offered enough services all predicted a lower relationship quality.

In the study by Littell and Tajima (2000) mentioned earlier, they found that programs with a wide range of concrete services and advocacy efforts predicted higher collaboration. When clients have urgent financial or material difficulties, addressing these needs at the beginning of the case can help the worker-client relationship. DR tries to provide services that families identify and want to receive based on a comprehensive family needs assessment and case management approach. The overall effectiveness of matching needs with services on service outcomes is found in some studies on substance abuse treatment involving families in child welfare. Through case management, tangible and intangible services were provided to address family needs.

Smith and Marsh (2002) examined the relationship between a service-need match and substance abuse treatment outcomes for mothers in the child welfare system. They found that counseling services, such as domestic violence services and family counseling, that matched needs and services were associated with reduced reports of substance abuse. They also found that matched ancillary services, such as housing, job training, and legal services, predicted clients' satisfaction with treatment. Client satisfaction was measured by asking whether treatment had

helped them to control substance use. Marsh, Cao, Guerreo, and Shin (2009) found that substance abuse counseling and service-need match predicted a higher rate of retention and a reduction of post-treatment substance use for African-Americans and Whites. Choi and Ryan (2007) found that matching services in mental health, housing, family counseling, and substance abuse treatment with the needs of families with multiple problems increased the likelihood of family reunification.

Service-need match was also examined in its relationship with child welfare outcome in the studies on FPS reviewed in the previous section. Ryan and Schuerman (2004) found a reduced rate of child maltreatment recurrence among families who had difficulties in paying bills and received clothing, furniture, supplies, and housing assistance. However, they doubted whether the services addressed family needs because family problems in paying monthly bills did not disappear through service receipt. The study by Littell and Shuerman (2002) found no linkages between certain aspects of FPS and subgroups of families, speculating that this can be due to limited information on the fit between family problems and the types of specific services provided with FPS.

It seems that the impact of engagement on child welfare outcomes, factors related to engagement, and the impact of service-need match based on a case management approach still need to be examined by future research, which can provide more definitive conclusions for policy and practice. Also, in some studies, client participation, collaboration and compliance was measured through caseworker reports rather than caregiver reports (Choi & Ryan, 2007; Littell, 1999; Littell & Tajima, 2000) while others just asked caregivers (Littell & Girvin, 2005; Chapman et al., 2003; Marsh et al., 2009; Smith & Marsh, 2002). Measuring these variables vary across studies and is not well developed or established (Yatchmenoff, 2005). Even when clients

identify needs, service-need match, or satisfaction, it is not very clear what links those factors have with child welfare outcomes. In other words, service-needs match, satisfaction, participation, collaboration, and compliance can lead to actual positive family changes or progress. However, an alternative explanation is that for families with the same amount of progress and more participation, caseworkers can make judgments on family unification (Choi & Ryan, 2007; Ryan & Schuerman, 2004). Authors suggest that future research needs to examine what aspects in family change or progress link need-service match, engagement, and satisfaction to positive child welfare outcomes (Ryan & Schuerman, 2004).

The review in this section suggests that what service is provided (the type of services), how service is provided (workers' approach), and whether services matche client needs are all associated with family engagement and outcomes. When families' needs for financial support are addressed, families tend to be more engaged in the subsequent clinical services that are provided. When caseworkers use their power in a supportive manner from the perspective of caregivers, this can also lead to more cooperation and improvement in family functioning. Finally, this positive change can lead to positive child welfare outcomes. However, the causal relationships among these variables are not clearly understood. Studies reviewed here also examined only part of these linkages by examining relationships between family engagement and the outcome, various factors and engagement as outcome, or service-need match and outcome. To reveal what consists of family engagement across studies and researchers, it seems that a more comprehensive theoretical framework is needed. Moreover, additional empirical research and theory building is needed to know what to measure for engagement and how it happens, what family change it leads to, and, in turn, what positive child welfare outcome are found.

Reviewing evaluation studies of DR, child maltreatment recurrence in the traditional child welfare system, and family engagement and outcomes all provide many different possible steps and suggestions for future studies. Put simply in a way applicable to an evaluation of DR, the next step is to conduct research that examines different components of DR and different aspects of family progress during and after service receipt, which together lead to positive child welfare outcomes. Individual, family, and case characteristics also need to be considered because different mechanisms of service effectiveness can be identified, depending on those inherent characteristics. In the next chapter, the conceptual frameworks will be reviewed, which will conceptualize the specific support from PSSF and elements of family improvement for this study.

CHAPTER 3

CONCEPTUAL FRAMEWORKS

In this chapter, I review the social support framework and the family stress theory, the Double ABCX Model. I conclude this chapter with research hypotheses based on the conceptual frameworks reviewed in this chapter and empirical research reviewed in the previous chapter.

3.1 Social Support

The concept of social support provides a perspective of how services and other input from the FAR pathway can be conceptualized. Since the FAR pathway provides not only certain types of services, but also an engaging, respectful, and non-adversarial approach, an array of beneficial input from the FAR pathway can be viewed as social support, which covers different categories of support.

According to Cohen and Will (1985), social support buffers persons from the potentially harmful influence of stressful events. In the buffering model of social support that prevents illness caused by stress, Cohen and Wills (1985) hypothesized two points where social support can alleviate the harmful effect of stress: First, when people appraise the potential stressful event, the perception that there is possible support and resources from others can help reduce the level of stress. This redefinition of potential harm can improve someone's perceived ability to cope with the demands of stressful events. Second, when a person's appraisal of stressful events leads to an emotionally-linked physiological reaction or behavior adaptation, social support can help

re-appraise the event and inhibit a maladjustive response, instead facilitating an adjustive response.

There are many studies that revealed the lack of social support among parents engaged in maltreatment (e.g. Coohey, 1996; Coohey, 2007; Corse, Schmid & Trickett, 1990; Polansky, Ammons, & Gaudin, 1985; Polansky, Gaudin, et al., 1985) and, to a lesser extent, there are studies that found social support can predict the risk of child maltreatment (e.g. Bishop & LeadBeater, 1999; Ferarri, 2002). Interestingly, researchers also pointed out that social networks or social support are not necessarily beneficial or positive. Certain social networks can be draining rather than supportive for parents at risk (Lindblad-Goldberg, & Dukes, 1985). For example, maltreating parents reported some of their network members are more critical than supportive (Gaudin, Polansky, Kilpatrick, & Shilton, 1993), and those parents have more aggressive and angry interactions towards those members (Corse et al., 1990). The characteristics of social networks and parents' perceptions of social support should be considered. Members of social networks can promote risk factors for child maltreatment, such as alcohol and drug abuse (Cash & Wilke, 2003). But social network can also sanction and monitor these behaviors, reducing those risks (Korbin, Coulton, Chard, Platt-Houston, & Su, 1998).

Social support in these studies was usually conceptualized as support from an informal source such as a spouse, extended family members, friends, and neighbors rather than professional helpers. However, families at risk of child maltreatment are often also exposed to professional helpers, such as welfare office workers, mental health or substance abuse therapists, home visitors for mothers with new born babies, and child welfare agency workers. Social support can be obtained from various sources, including natural networks such as kinship members, neighbors, and friends as well as professionals such as therapists and social service

agency workers (Pilisuk, & Parks, 1983; Thomson, 1995). Depending on these sources of support, social support can be categorized into formal and informal supports (Rodrigo, Martin, Maiquez, & Rodriguez; 2007; Thomson, 1995).

Although social support was commonly examined in studies and the lack of social support from informal sources was associated with child maltreatment, these studies did not specify the types of support that actually prevent first time child maltreatment, let alone the possibility of recurrence. Services from formal resources such as child welfare systems have not been conceptualized as social support. However, knowing what different types and sources of social support from child welfare systems can be more effective (Cohen & McKay, 1984) to help a family change, leading to positive child welfare outcomes, will contribute to our knowledge on the effectiveness of DR. Considering that services from DR and its approach are more comprehensive than traditional child welfare services, the categorization of social support can provide a useful framework to identify how different components of social support work in DR.

There are many different definitions of social support and categories of social support. Thomson (1995) defined social support as social relationships that provide material and interpersonal resources valuable to a recipient. The categories of social support listed by researchers (Cohen & McKay, 1984; Cohen & Will, 1985; Thomson, 1995) share similarities but also differences. Thomson (1995) categorized social support by its function. First, emotional sustenance comes from social support such as esteem-enhancing affirmation, empathy, compassion, and a sense of sharing stress and problems. Second, another function of social support is counseling, advice, and giving guidance, which gives direction in how to handle challenging life events. Third, social support can provide services, access to information, and

material resources and assistance. Fourth, social support can function as skill acquisition. Lastly, social support provides social monitoring and social control.

Cohen and Will (1985) suggested four types of support–esteem support, informational support, social companionship, and instrumental support. Esteem support can be provided when people are valued for their own worth and their experiences are accepted. Informational support, or appraisal support, is provided when people receive help in defining, understanding, and coping with problematic situations. Social companionship, also called belongingness, is provided when people spend time with others in leisure and recreational activities that can reduce stress. Instrumental support is provided when people receive financial aid, material resources, and needed services. Lastly, Cohen and McKay (1984) categorized social support into three types–tangible, appraisal, and emotional. Emotional support consists of self-esteem and feelings of belonging.

In this study, support from DR is conceptualized as tangible support, emotional support, and appraisal support. Tangible support is defined as concrete services that include material assistance and help for specific situations, such as child care and transportation. Emotional support is defined as the extent to which a family thinks that the caseworker listens to and respects them. Appraisal support is defined as a wide range of services–including therapy, training, counseling, support groups and worker-family meetings–that help a family to understand and cope with their situation.

3.2 Family Stress Theory - Double ABCX Model

The Double ABCX Model provides a framework that describes how social support can prevent child maltreatment recurrence as well as first-time child maltreatment as a form of mal-

adjusted behavior. It also explains how social support leads to adjusted behavior through changes in the family.

The Double ABCX Model is based on a family system or family unit and explains how a family maintains a functional and stable system in the face of stressful events. In Hills' ABCX family crisis model (Hill, 1958), Hill explained that a family comes to face crisis through the interaction of stressor event "A", family's resource "B", and their perception of the stressor "C". More specifically, "A" stands for the stressor event and hardships associated with the stressor event; "B" represents the family's resources or ability to a prevent a crisis or disruption in the family system as caused by the stressor event; "C" refers to the family's subjective definition of the stressor event and the hardship; and "X" stands for the crisis. When a family is able to resist changes in the family system and to remain stable using existing resources (B and C), stressor events (A) may not cause a crisis (X) in the family.

The Double ABCX model was originally developed to explain the process of a military family's adaptation to stressful events, such as relocation or the loss of family members. It is based on Hill's ABCX model, but expands it by embracing additional concepts such as additional life stressors and strains before and after a crisis, changes in a family's definition of the stressors over time, a family's coping strategies, and the range of outcomes of coping from bonadaptation to maladaptation (McCubbin & Patterson, 1983). The "aA" factor in the Double ABCX Model means a pile-up of demands from stressors and strains. The "bB" factor stands for resources to meet the piled up demands. The "cC" factor is the subjective meaning a family gives to the total crisis situation. The "xX" refers to the family adaptation as an outcome of family coping with the aA, bB, and cC factors.

In addition to the occurrence of a stressful event and its hardship labeled as "A" in the original model, in the Double ABCX model, stress and demands in family life pile up over time. McCubbin and Patterson (1983) identified the sources of pile-up demands: normative transition in family life development, prior strains such as unresolved conflict in the relationship with in-laws, consequences of family coping such as disapproval of certain coping behaviors by kinship members, and the ambiguity about family structure and accompanied confusion of how to address that.

The "bB" factor stands for resources to meet the piled up demands and those resources include characteristics of individual members, the family unit, and the community (McCubbin & Patterson, 1983). Personal resources are the characteristics of individual family members, such as self-esteem, skill, and knowledge (Lavee, McCubbin, & Patterson, 1985). Family system resources are internal attributes of the family unit, which include cohesion, communication, and adaptability. Social support in the community is the capabilities, network of people, or institutions outside the family that families can turn to in times of need. Families with existing or expanded social support are better at resisting and recovering from crisis and restoring stability in the family system (McCubbin & Patterson, 1983). Over time, families appear to use two types of resources–existing resources and expanded family resources. Whereas existing resources are those that families already have as individual members, a family unit, or community members, expanded family resources are those developed in response to the additional demands from a crisis or increased family demands. The availability of these resources influence how a family defines and appraises demands as well chooses which coping strategies to use. For example, having limited resources can contribute to a family's negative definition of demands, causing more distress that leads to the coping strategy of avoidance or denial.

The “cC” factor is the subjective meaning or perception a family gives to the total crisis situation, including original and additional stressors and strains, old and new resources, and an appraisal of needed action for the recovery of family stability (McCubbin & Patterson, 1983). A successful perception of the crisis situation and giving meaning to it includes a) clarifying problems, demands, and tasks in a way that makes them more manageable, b) decreasing emotional intensity caused by the crisis situation, and c) maintaining a family’s morale in order to promote each members’ social and emotional development. How a family defines the situation has a great influence on how a family copes with the situation. The resources a family has influence the family’s perception.

McCubbin and Patterson (1983) placed coping as a bridging concept in the Double ABCX Model, wherein family resources and perception or definition of the situation are combined in choosing the cognitive and behavioral response to restore the stability. Coping efforts can be aimed at a) eliminating and/or avoiding strains and stressors, b) managing the adversities of the situation, c) maintaining a family’s morale and integrity, d) obtaining and developing resources to meet demands, and e) making structural changes in the family system to accommodate new demands (McCubbin, 1979). Menaghan (1983) specified two categories of coping–coping styles and coping efforts. Coping styles are coping strategies that represent typical and habitual preferences for ways to approach problems. For example, people can withdraw or to move closer to a problem; they can blame others or blame themselves, or they can be active or reactive. On the other hand, coping efforts are specific actions (both cognitive and behavioral) people take in specific situations to reduce the problem or stress. For example, people can appraise problems, ask for help, or express emotions. In choosing different ways to

cope, the available resources are expected to influence coping style. Coping style, resources, and the characteristics of specific situations altogether are expected to influence coping efforts.

As an outcome of coping, McCubbin and Patterson (1983) emphasized family adaption rather than simply looking at crisis reduction as the ABCX model does. As outcomes of family efforts to achieve balance, the continuum of family adaptation includes both positive and negative ends–bonadaptation and maladaptation. Balance can be achieved when the demands of individual members of a family are met by the capabilities of the family as a unit, and when the demands of the family unit are met by the capability of the community. In other words, bonadaptaion is possible when there is a balanced fit at both the levels of member-to-family and family-to-community. Maladaptation results from imbalance of the fit at either level of member-to-family or family-to-community. Bonadapation maintains family integrity, promotes the development of both individual members and the family unit, family independence, and the sense of control over environmental influences. On the other hand, maladaptation brings deterioration in family integrity, curtailment in the well-being and development of an individual member of the family, or a loss of family independence and autonomy.

The five propositions based on the variables in the Double ABCX Model stated by Lavee et al. (1985) helps us to understand the relationships of the variables more clearly, although coping was not included among their propositions. First, strain associated with a crisis situation becomes more severe when there are other existing demand from stressors and strains. Second, the more severe the piled-up demands of stressors and strains are, the harder it is for a family to adapt to the crisis situation. Third, the more personal resources, family system resources, and social support families have, the more adaptive a family is. Fourth, the more personal resources, family system resources, and social support families have, the less severe the demands

emanating from the stressors. Fifth, family's perception[1] influences its adaptation in that positive perceptions bring about better adaptation.

The effect of personal resources, family system resources, and social support stated in these propositions implies that these resources can play a role in the prevention of child maltreatment. Based on the Double ABCX model, it seems that maladapted families are those with instances of child maltreatment that under stressful events. This maladaptation occurs due to an imbalance of fit at the member-to-family and/or family-to-community level. More specifically, a family's resources did not meet demands from stressful events and the family's perception as well as coping strategies did not lead to adaptation, where healthy development is promoted. Social support is one of the most importance resources (McCubbin & Patterson, 1983). Although individual and family characteristics are powerful factors that affect parenting, social support is important in terms of prevention because support from professionals and natural helpers can improve an individual member's and a family's resources. Social support as a prevention strategy actually targets individual and family system change, and the change can occur in terms of resources, perception, or coping. Changes in these factors are expected to bring a balanced fit at the member-to-family level and family-to-community level, which prevents child maltreatment.

In order for the Double ABCX model to be more applicable to child maltreatment prevention, variables in the model need to be specified in the context of child maltreatment. Also, the relationships between variables of social support, coping, family perception, and the prevention of child maltreatment need to be tested. For example, regarding stressful event (aA factor), the characteristics of stressful events such as sequence can exacerbate the demands of these events for at-risk families (Thoits, 1995). Mothers with unresolved strains due to dropping

[1] In the article of Lavee et al. (1985), perception was interchangeable with coherence.

out of school, poverty, and teenage motherhood will experience different demands from motherhood than would middle-class educated women. As a family's problems such as mental health or substance abuse become chronic, a parent's coping behavior might turn out to be ineffective and kinship members can disapprove the coping behavior. Being unmarried and having an uncertain status for father figures can contribute to the piled-up demands, which can lead to maladaptive parenting behavior. Thus, we need to consider various ways in which the piled-up demands of stressful events affect parents' maltreating behavior.

To understand the meaning families give to situations seems critical in understanding why certain families at risk of child maltreatment are more resilient in the face of similar stressful events with the given resources. How they interpret the situation of stressful events and the resources they have will contribute to the understanding of why a family chooses certain coping styles and efforts. What types of coping can be more effective under certain stressful events also needs to be examined (Thoits, 1995). To know what forms of social support from the child welfare system can be more effective in helping families develop appropriate coping strategies and perceptions will also have significant child welfare policy and practice implications (Thoits, 1995). These possibly complex and less known relationships among characteristics of social support, stressful events, coping, and family perception provide promising future research areas (Cohen & Will, 1985; Cohen & McKay, 1984; Thoits, 1995). Moreover, the relationship among social support, coping, and perception becomes more complicated when characteristics of personal and family resources are taken into consideration (Cohen & Will, 1985; Thoits, 1995). Understanding these relationships through research and building more sophisticated theories based on the child maltreatment context will significantly advance child maltreatment prevention policy and practice.

Additionally, the Double ABCX model brings to light the importance of a family's definition of the situation, coping responses, and utilization of available resources, not other people's interpretation of the stressful events or resources. This implies that the families' subjective interpretation of the situation and their choice of coping in the interaction with their resources should be at the center of trying to understand how social support can be effective in preventing child maltreatment.

The Double ABCX model has not been tested widely in child maltreatment field even though there are studies that tried to apply its concepts to child maltreatment prevention (Howze & Kotch, 1984) or tested the model empirically (Kotch, Browne, Ringwalt, Stewart, Ruina et al., 1995; Kotch, Browne, Ringwalt, Dufort, Ruina, et al., 1997; Kotch, Browne, Dufort, Winsor, & Catellier, 1999). In other areas, such as health, more studies have examined the theory, incorporating the variables conceptualized by the theory (e.g. Reichman, Miller, Gordon, & Hendricks- Munoz, 2000). Adopting the Double ABCX model widely used in other fields will help us to understand how supports from PSSF can prevent child maltreatment recurrence, an indicator of maladjusted behavior.

3.3 Research Hypotheses

Based on conceptual frameworks reviewed in this chapter and empirical studies reviewed in the previous chapter, I hypothesized the process of the impact of the differential response on child welfare outcomes.

1) Families in the experimental group (non-investigation pathway) will receive more tangible, appraisal[2] and emotional support and receive support more quickly than families in the control group (traditional investigation pathway).

2) Families in the experimental group will experience positive service experiences (satisfaction and involvement)/attitudes (cooperation, receptiveness, and engagement) and better matches between needs and services than families in the control group.

3) Families with more tangible, appraisal and emotional support and receive that support more quickly will experience positive service experiences/attitudes and better matches between needs and services.

4) Positive service experiences/attitudes and better matches between needs and services will help explain improved family functioning, family hardiness, reduced stress, and improved ability to cope at the time of case closures.

5) Improved family functioning, family hardiness, reduced stress, and improved ability to cope at the time of case closures will help explain reduced child maltreatment re-report and recurrence.

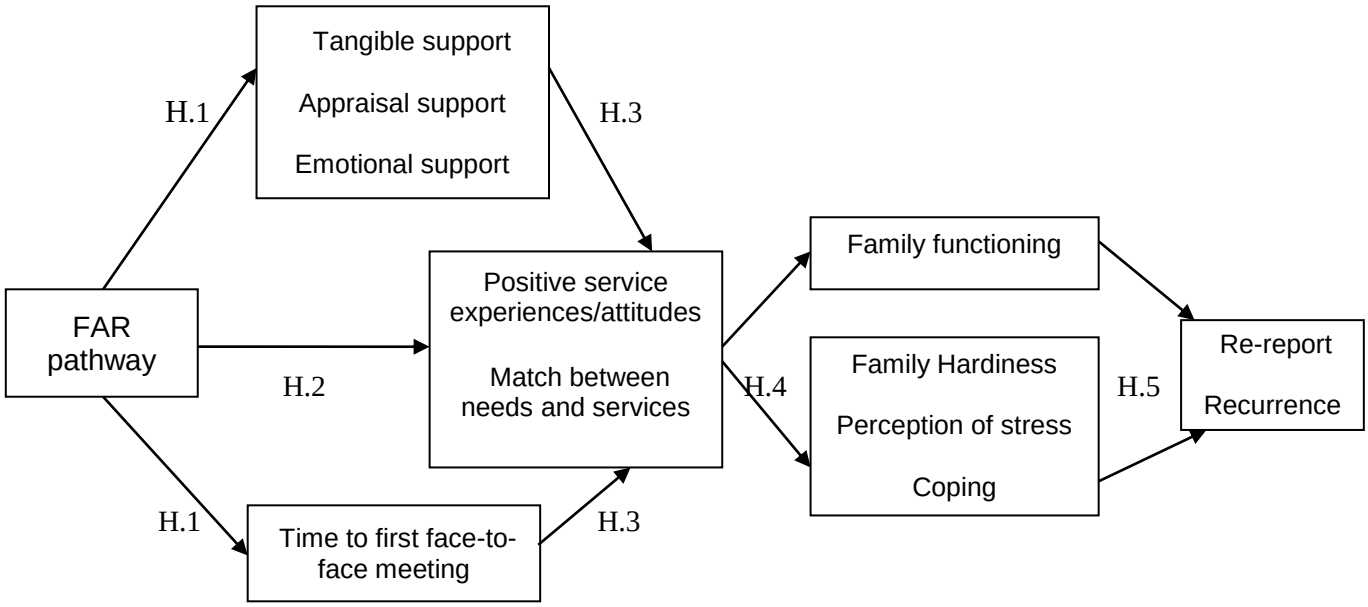


Figure 3.1. The logic model of the impact of DR on child welfare outcomes

[2] Appraisal support is supports from PSSF that help families appraise and cope with their situations.

Hypotheses 1 and 2 will inform whether DR provides more support and leads to more positive experiences/attitudes of families than the traditional system. Hypothesis 3, 4 and 5 will inform us whether the aspects associated with DR lead to positive service experiences/attitudes, adaptive family changes and ultimately positive child welfare outcomes. The findings aim to inform us of the underlying mechanism of DR so that we can improve the aspects of DR critical to the child safety improvements.

To test the proposed hypotheses, I use two types of data source—family reported data and caseworker reported data. There are separate reports from families and caseworkers on tangible, appraisal support, family functioning and families' positive service experiences/attitudes separately. Literature in psychotherapy or psychology showed that client reports of the helping relationship predicted program outcomes better than provider reports (e.g. Horvath, 2000). Literature in home visiting programs also showed that parent reports on the helping relationship or quality of home visits were not necessarily associated with reports of home visitor report or independent researchers (Roggman, Boyce, Cook, & Jump, 2001). Based on exiting literature on the helping relationships in child welfare and growing interests in their impact on program outcomes, it seems worth exploring how two types of data—families and caseworkers—support proposed hypotheses.

In addition to the variables described above, covariates of household income, caregiver's race, the number of children at home, and caregiver's ages are controlled for. Even though this study utilizes a random experimental design, certain hypotheses also try to reveal relationships among variables regardless of the pathway assignment.

CHAPTER 4

RESEARCH METHODOLOGY

In this chapter, I describe research methodology regarding participants and sampling, research data and data collection methods, survey procedure, interviewer training, variables and measures, human subjects and institutional review board, and method of analysis.

4.1 Participants and Sampling

Research participants were a subgroup of caregivers who participated in the larger evaluation project of the PSSF. The PSSF evaluation project had a random control experimental design, in which child maltreatment cases with low risk were randomly assigned to either the traditional investigation response (IR) pathway or the family assessment response (FAR) pathway. Once caregivers were referred to the State Central Registry (SCR or "Hotline") of Illinois and screened in, their eligibility for the PSSF was assessed. Families that met the eligibility criteria set by the Illinois Department of Children and Family Services were assigned to a randomizer to determine if they would receive FAR services or a traditional investigation. Families deemed to be high risk were referred to the traditional investigation. Among families eligible for PSSF due to their low risk, half of the families were randomly assigned to the FAR pathway (experimental group) and the other half was randomly assigned to the traditional IR pathway (control group). However, the ratio between the two pathways fluctuated depending on the need for Illinois Department of Child and Family Services. The purpose of larger RCT

evaluation research was to compare child welfare outcomes among families in the two different pathways.

This study was based on a subgroup of 373 caregivers and their households recruited from a larger sample of PSSF RCT evaluation. Caregivers were contacted for this study if their cases had been closed and caregivers completed and returned the Family Exit Survey of the larger evaluation project since April 10, 2011. Caregivers were recruited in the order that they exited from either of the pathways until about 200 caregivers were recruited for both experimental and control groups. The first day of families' involvement in PSSF was November 1st, 2010, thus on April 10, 2011 and after, the length of recruited families' cases openings ranged from a few days at minimum to 90 days at maximum, allowing the sample to have a wide range of the lengths of case openings, that is, from days to months. The recruiting and data collection period was from April 10, 2011 to January 10, 2012. A total of 418 caregivers participated in the current study; they were recruited from among all caregivers who participated in the larger evaluation project, and had expressed their interest in future studies and provided their contact information. About 55 % of all contacted caregivers agreed to participate in this study. Eleven caregivers did not comply properly with informed consent requirements, so I dropped these mothers from the final sample. Among 407 caregivers, data on 373 caregivers (190 in DR track, 183 in IR track) were available from the Illinois CPS data system regarding their cases and family characteristics. The follow-up period for re-reports or recurrences was 6 months after case closure.

4.2 Research Data and Data Collection

4.2.1 Primary Survey data

Primary data for this study were collected through phone surveys with standardized measurements and mail surveys with the same measurement for those not reached by phone. Immediately after a family exited either the FAR pathway or the IR pathway and completed the Family Exit Survey of the larger PSSF evaluation project, they were surveyed with standardized measurements regarding coping and family hardiness and perceived stress. These measures and items are explained in the section of Variables and Measures.

4.2.2 Secondary Survey data

The Family Exit Survey and the Case Specific Questionnaire for the larger evaluation project were used. These secondary data provided information on the pathway assignment, tangible support, appraisal support, emotional support, service-need match, family service experience (satisfaction and involvement; cooperation, receptiveness and engagement), and improvement in family functioning as perceived by both families and caseworkers.

4.2.3 The Illinois State Automated Child Welfare Information System (SACWIS)

The SACWIS stores child welfare administrative data and provides various information regarding both processes and outcomes of child welfare. Available information included demographic characteristics of children and families, allegation and disposition data, and information on subsequent maltreatment reports and investigation dispositions. Many of the

control variables (family and case characteristics) and dependent variables (time to first meeting, re-reports and recurrences) were drawn from SACWIS.

4.3 Survey Procedure

The surveys of this study were conducted through structured telephone interviews and mail surveys for those not reached by phone after 20 phone calls. First, the investigator obtained the contact information of caregivers whose cases were closed and who completed the Family Exit Survey. Recruiting letter packets were mailed to caregivers to introduce the study background and invite them to join, until 400 subjects were recruited. The letter notified the caregivers that they would receive a phone call within a week, and that they would be asked whether they would participate in research and set an interview time. The recruiting packet included a cover letter, a survey questionnaire and a consent form which caregivers could examine before they decided to participate. The recruiting letters explained detailed information pertaining to the study, including the purpose of the study, the duration of the interviews, confidentiality, incentives for participation, and the contact information of the investigator for questions and concerns. Participants could look at the enclosed questionnaire and consent form while a telephone interviewer read the items to a participant over the phone during the interview. The recruiting letter, survey questionnaire, and the consent form can be found in the Appendix of this document.

About a week after mailing the packets, two trained interviewers made phone calls to caregivers who received recruiting letters in order to invite them to participate in the study. The interviewers were trained and used scripts to converse with caregivers. Based on the script and the recruiting letter, they reminded caregivers of the purpose of the study and other details over

the phone. If the caregivers wanted to do the interview at that time rather than wait, the phone survey was conducted. Otherwise, the interviewer made another call to conduct the telephone interview. The interviewers conducted the interview following the protocol using scripts approved by IRB. The remuneration was offered by mailing a $15 gift card from Wal-Mart to participants after the interview.

The interviewers were hired from the School of Social Work at the University of Illinois at Urbana-Champaign. Through investigator's personal relationships and public hiring processes, one doctoral student and one master student were hired. After one of them withdrew, a different master student was hired. Interviewers were paid $20 per hour for interviewing and contacting subjects.

For caregivers willing to participate in the research, surveys were conducted regarding their coping (28 items), and family hardiness (20 items), social support from a spouse (8 items), perceptions of stress (10 items), chronic and acute stressors (83-90 items depending on the number of their experienced stressors), and negative social interactions (7 items). The whole survey (163 items) took about 20-30 minutes. This study did not use data collected on social support from spouses, chronic and acute stressors and negative social interactions.

For caregivers not reached on the phone after 20 phone calls and for those who preferred to fill out a mail survey, mail survey packets were sent out. The packet included a cover letter, survey questionnaire, two copies of the consent form (one for caregivers' information and the other for return), and a return envelope. The cover letter reminded caregivers of detailed information concerning the study, including the purpose of the study, the duration of the interview, confidentiality, an incentive for participation, and the contact information of the investigator for questions and concerns. Caregivers returned the completed survey to the

investigator and compensation was offered by mailing a $15 gift card from Wal-Mart to participants. About 19 % of all caregivers in the sample participated in this study through mail surveys.

4.4 Interviewer Training

Two hired interviewers participated in a half-day training program (4 hours) offered by the Survey Research Lab (SRL) at the University of Illinois at Urbana Champaign regarding the study background and purpose, recruitment and interview procedure, subject contact rules, interviewer conduct, questionnaires and scripts, confidentiality, and post-interview procedures and rules. For the additional interviewer hired, the investigator provided the training with the material used in the training from the SRL.

4.5 Variables and Measures

4.5.1 Independent Variable

FAR pathway. Pathway assignment was measured with the value from the Family Exit Survey on which pathway a family had been assigned (1 = FAR pathway, 0 = IR pathway). This can be different from the pathway that a family was originally assigned to since when caseworker can transfer a family from the FAR pathway to the IR pathway. In the sample, only five caseworkers were transferred from the FAR to the IR and it doesn't seem that using the actual pathway that a family was on would make any impact on the analysis. Random assignment started with a 1:1 ratio for FAR and IR but the ratio gradually changed to one FAR to 2 or 3 IR cases over time by the Illinois Department of Children and Family Services.

4.5.2 Mediating Variables

Tangible support –family report. Families reported the number of concrete services provided to caregivers and includes services addressing material needs and health services (help with housing payments, emergency shelter or food, TANF, employment assistance, medical or dental care, etc.) reported by families through the Family Exit Survey. Sixteen items in the Family Exit Survey measured receipt of tangible support. When families reported that they received no services, the value of tangible support was coded as '0'. Also, when families did not report whether they received any services or not, the value was coded as '0' as well, following the coding system of the larger Illinois DR evaluation project[3]. When families reported that they received certain services, the number of received services was counted and used for analysis.

Tangible support –caseworker report. Two items in the Case Specific Questionnaire measured tangible support including 'whether services to address material needs were provided' (yes or no); 'whether health services were provided' (yes or no). When caseworkers reported that families received no services, the value of tangible support was coded as '0'. When caseworkers reported that families received certain services, the number of received services was counted and used for analysis. When caseworkers did not report whether families received any services or not, the value was coded as '0' as well, to be consistent with the coding system for family reported tangible support, although the coding system of the larger Illinois DR evaluation treated these cases with missing values[4].

Appraisal support-family report. Families reported the number of services that help

[3] The Illinois DR evaluation coding system followed the guideline from the Quality Improvement Center for Differential Response which funded three DR implementation and evaluation sites in the nation including Illinois.
[4] Again, the Illinois DR evaluation coding system followed the guideline from the Quality Improvement Center for Differential Response which funded three DR implementation and evaluation sites.

families appraise and cope with their situations and includes counseling services, domestic violence services, mental health services, substance abuse treatment, parenting classes, support group and training/education based on the Family Exit Survey. Nine items measured appraisal support in the areas mentioned above. The number of services received was counted and used for analysis. If families did not receive any appraisal ssupport, the value was coded as '0'.

Appraisal support-caseworker report. Caseworkers reported the number of services including substance abuse treatment, mental health services, and parenting classes based on the Case Specific Questionnaire. Six items in the Case Specific Questionnaire measured appraisal support. They were "Whether substance abuse services were provided" (yes or no); "Whether mental health services were provided" (yes or no); "Whether parenting classes were provided" (yes or no); "Whether domestic violence services were provided' (yes or no); 'Whether social support services such as marital/family counseling and support group were provided" (yes or no); and "Whether educational services were provided" (yes or no). Since caseworkers were asked to check the items only when services were provided to families, missing values were coded as '0' meaning no receipt of services. If none of these services was provided, it was coded as '0'.

Emotional support. Families evaluated worker's attitudes with which they listen to the families, understand their situations, and show respect for the experiences and values of the families. The Family Exit Survey had three items for emotional support including "Overall, how carefully did the caseworkers listen to what you and other members of your family had to say?" (0 = not at all carefully, 1 = somewhat carefully, 1= very carefully); "Overall, do you feel the caseworker understood your family's needs?" (1 = yes, 0 = no); and "Did the caseworker recognize the things that you and your family do well?" (1 = yes, 0 = no). Confirmatory factor

analysis created a latent variable of emotional support with these three items. The reliability of the items (Cronbach alpha) was .82

Time to first face-to-face meeting. Time to first face-to-face meeting used a proxy of the number of days between initial CPS reports and caseworkers' submissions of first risk assessment results. SACWIS provided this information.

Positive service experiences-family report. Families reported their experiences with services regarding satisfaction with both the help and the caseworkers as well as the extent to which families were involved at the meeting with a worker. The Family Exit Survey had five items for positive service experiences and confirmatory factor analysis created one latent variable of positive service experiences with these items. Items included "How satisfied are you with the way you and your family were treated by the caseworker that visited your home?" (0 = not at all satisfied, 1 = somewhat satisfied, 2 = very satisfied); "How satisfied are you with the help you and your family received from the caseworker?" (0 = not at all satisfied, 1 = somewhat satisfied, 2 = very satisfied); "How likely would you be to call the caseworker if you or your family need help in the future?" (0 = not at all likely, 1 = somewhat likely, 2 = very likely); "Were there things that were important to you or your family that did not get talked about with the caseworker?" (0 = yes, 1 = no); and "Did the caseworker consider your opinions before making decisions that concerned you and your family?" (1 = yes, 0 = no). The reliability (Chronbach's alpha) of these five items was .82.

Positive service attitudes-caseworker report. Caseworkers reported families' attitudes with services in terms of being cooperative, receptive to help and engaged. The Case Specific Questionnaire contained items regarding family involvement at the first and last meeting with a caseworker on being cooperative, receptive to help, and engaged. Confirmatory factor analysis

created a latent variable of family experiences as reported by caseworkers with three items created by averaging the value of being cooperative, receptive to help and engaged at the first and last meetings. These three indicators had a reliability of .899. When a caseworker did not meet family members more than once, the values at the first meeting were used. Specific items included the following: "Rate the characteristics of the family members at the first time you met with them" (Cooperative: not at all = 0, a little = 1, moderately = 2, very = 3); "If you met with members of the family more than one time, rate these characteristics the last time you met with them" (Cooperative: not at all = 0, a little = 1, moderately = 2, very = 3); "Rate the characteristics of the family members at the first time you met with them" (Receptive to help: not at all = 0, a little = 1, moderately = 2, very = 3); "If you met with members of the family more than one time, rate these characteristics the last time you met with them" (Receptive to help: not at all = 0, a little = 1, moderately = 2, very = 3); and "Rate the characteristics of the family members at the first time you met with them" (Engaged: not at all = 0, a little = 1, moderately = 2, very = 3); and "If you met with members of the family more than one time, rate these characteristics the last time you met with them" (Engaged: not at all = 0, a little = 1, moderately = 2, very = 3).

A match between services and needs. Families reported whether the services and the family needs were matched. The Family Exit Survey had items for matches. Items included "Did the caseworker help you or your family to get any of following help or services?" (with the options of 25 types of services or "did not receive any services"); and "Was there any help that your family needed but you did not receive?" (yes or no). If a family answers 'yes' to the second question, it is coded '0' as a mismatch regardless of the answers for the first question. If a family answers 'no' for the second question and 'no' for the first question, it was coded '1' as a match.

If a family answers ‘no’ for the second question and ‘yes’ for the first question, two additional items confirmed the match between services and needs for them; “If you received some help or services from the worker or another source, was it the kind you needed?” (yes or no); and, “If you received some help or services from the worker or another source, was it enough to really help you?” (yes or no). It was coded ‘1’ as a match if caregivers answered ‘yes’ for both questions. All the other cases were coded ‘0’ as a mismatch. Table 4.1. displays various cases coded as mismatches or matches depending on the answers for these items.

Family functioning-family report. Families reported on improvement in their functioning after CPS involvement. Confirmatory factor analysis used 4 items from the Family Exit Survey to create a latent variable of family reported family functioning. The reliability was .83. The items in the Family Exit Survey included questions such as: “Overall, is your family better off or worse off because of your experience with the caseworker?” (we are better off = 1, we are the same = 0, we are worse off = 0); “Did your experience with the caseworker help you to become a

Table 4.1. Coding matches or mismatches

Item	**Options in the questionnaire**				
Did the caseworker help you or your family to get any of the following help or services?	Yes (Checking any of the 25 types of services)			No (Did not receive any services)	
Was there any help that your family needed that you did not receive?	Yes	No		Yes	No
If you received some help or services from the worker or another source, was it the kind you needed?	NA	Yes	All the other answers (yes, no No, yes No, no)	NA	NA
If you received some help or services from the worker or another source, was it enough to really help you?		Yes		NA	NA
Dummy coded Match between needs and services	Mismatch (0)	Match (1)	Mismatch (0)	Mismatch (0)	Match (1)

better parent?" (1 = yes, 0 = no); "Did your experience with the caseworker help you to better provide for the safety of your child(ren)?" (1 = yes, 0 = no); and "Did your experience with the caseworker help you to better provide necessities like food, clothing, shelter, or medical services?" (1 = yes, 0 = no).

Family functioning-caseworker report. Caseworkers reported on the absence of family needs or whether family needs at the case opening were addressed at the case closure. The items in the Case Specific Questionnaire included "Check all family needs present at case opening (material needs, substance abuse, physical health, mental health, parenting skills/discipline, domestic violence, education, social support (8 areas)" (yes or no); "Whether the condition was addressed while the case was open" (yes or no). Using these 16 items, I created 8 variables with each area of needs. For example, if there was no need related to material needs at case opening, the value of '1' was given to "material needs addressed". If there were material needs at case opening, and they were addressed while the case was open, the value of '1' was also given to 'material needs addressed'. If there were material needs and they were not addressed, the value of '0' was given to 'material needs addressed'. In the same way, the remaining 7 areas were valued. The eight variables of each area had reliability of .948 and they were used for confirmatory factor analysis to create one latent variable of caseworker reported family functioning.

Family Hardiness. Family hardiness was measured by the Family Hardiness Index (FHI) developed by McCubbin, McCubbin, and Thompson (1987). The FHI is designed to measure the internal strengths and durability of the family characterized as a sense of control over the outcomes of life events and hardships, a view of change as beneficial and growth producing, and an active rather than passive orientation in managing stressful situations. The FHI is a 20-item

scale and consists of four factorial subscales, namely, Co-oriented commitment, Confidence, Challenge, and Control (McCubbin, et al., 1987). The Co-oriented commitment subscale is intended to measure the family's sense of internal strengths, dependability, and ability to work together. The Confidence subscale measures the family's sense of its ability to plan ahead, to be appreciated for efforts, to endure hardships and to experience life with interest and meaningfulness. The Challenge subscale measures the family's efforts to be active, innovative, and to learn and experience new things. The Control subscale measures the family's sense of being in control of life rather than being shaped by circumstances and outside events. In this study, I used values of 4 indicators based on the sums of respective subscales for confirmatory factor analysis and created a latent variable of family hardiness. These four indicators had a reliability of .730.

Perceived stress. Caregivers' perceptions of situations are measured by the Perceived Stress Scale (PSS). The PSS is a 10-item measure developed by Cohen, Kamarck, and Memelstein (1983) and measures global stress. The PSS was originally developed as a 14-item scale and designed to measure the degree of appraised stressfulness of situations in an individual's life. Later, a 10-item version (PSS-10) showed stronger psychometric characteristics in comparison to the 14-item scale (Cohen & Williamson, 1988). The PSS has an adequate reliability coefficient from .74 to .91 and validity evidence (Reis, Hino, Rodriguez-Anez, 2010). The respondents rated on a five-point Likert-type scale (1 = never, 5 = very often), the frequency of their feelings and thoughts regarding events and situations that occurred during the last month. In this study, only 6 items were used for creating a latent variable of perceived stress regarding events and situations during the last two weeks of cases in which caregivers had exited CPS services very recently. Exploratory factor analysis revealed that the original 10 items loaded on

two different factors, specifically, feelings of losing control and feelings of having control. Six items loaded on feelings of losing control were more closer to what this variable tries to measure in the current study compared to 4 items loaded on feelings of having control; four items were dropped and six items loaded on feelings of losing control were used for further analysis. Their reliability was .856. Confirmatory factor analysis created a latent variable of perceived stress with these 6 items. Some items are the following questions: “In the past two weeks, how often have you been upset because something happened unexpectedly?”; “How often have you felt that you were unable to control the important things in your life?”; and “How often have you felt nervous and stressed?”.

Coping. Brief COPE (B-COPE) is a shortened version of COPE that consists of 28 items, 2 items for 14 subscales (Carver, 1997). The items ask to what extent the respondents have been using certain ways of coping. The subscale reliability ranges from .50 to .90. Subscales include Self-distraction (items 1 and 19), Active coping (items 2 and 7), Denial (items 3 and 8), Substance use (items 4 and 11), Use of emotional support (items 5 and 15), Use of instrumental support (items 10 and 23), Behavioral disengagement (items 6 and 16), Venting (items 9 and 21), Positive reframing (items 12 and 17), Planning (items 14 and 25), Humor (items 18 and 28), Acceptance (items 20 and 24), Religion (items 22 and 27), and Self-blame (items 13 and 26). The respondents rate on a four-point Likert-type scale (1 = I haven't been doing this at all; 2 = I've been doing this a little bit; 3 = I've been doing this a medium amount; 4 = I've been doing this a lot) the extent of their use of a certain coping style.

Following suggestions on how to use the scale from the original creator of the scale, I conducted exploratory factor analysis to look for specific coping styles. I found two coping styles within the items, positive coping (items 2, 7, 12, 14, 20, and 25) and social support coping

(items 5, 10, 15, 17, and 23). Positive coping is active coping in order to handle situations, positive reframing of situations, planning and acceptance. The reliability of items loaded on positive coping is .81. Social support coping is the use of emotional support, or the use of instrumental support. The reliability of items loaded on social support coping is .85. Confirmatory factor analysis created two latent variables of positive coping and social support coping with items loaded on these two factors, respectively.

4.5.3 Dependent Variables

Child welfare outcomes

Re-reports. Re-reports to CPS are screened-in allegations for investigation in the traditional system during the six months after case closure. Although the national standard of the absence of child maltreatment recurrence is based on the six months after an initial report, many previous DR evaluation reports assessed child safety outcomes after case closure (NQIC, 2011). This is understandable because the purpose of the evaluation is to assess the CPS intervention on child safety. The current study follows the definition of re-reports in previous DR literature. A dichotomous variable was created using data from SACWIS.

Recurrences. Recurrences are re-reported cases, as indicated or substantiated during the next six months after case closure. A dichotomous variable was created using data from SACWIS.

4.5.4 Control Variables

Measures of caregiver and family characteristics

SACWIS provided information on caregivers' ages, the number of children in their households, the number of caretakers in the households and genders. The Family Exit Survey provided information on caregivers' race (White, Black and Other), ethnicity (Hispanic or Latino), household income ($0-$9,999=1; $10,000-$19,999=2; $20,000-$29,999=3; $30,000-$3,999=4; $40,000-$49,999=5; $50,000-$59,999=6; and $60,000 or more=7) and education (less than high school; high school graduates; and higher than high school, reference). Even though this study utilizes a random experimental design, certain hypotheses also try to reveal relationships among variables regardless of the pathway assignment and this led to include certain covariates in the analysis. In the structural equation modeling, I used caregivers' ages, the number of children in the household and income as continuous variables and caregivers' race as dichotomous variables. To keep the model fit values good in structural equation modeling, I used only these four selected variables based on existing literature. However, descriptive analysis provides information on all of the variables mentioned here in the next chapter.

Table 4.2. Definitions and data sources of variables

Variables	Definitions	Data sources
Independent variables		
Random track assignment	Assignment to FAR pathyway or IR pathway	Family Exit Survey
Mediating variables		
Tangible support	The number of provided concrete services such as services to address material needs and health services (help with housing payments, emergency shelter or food, TANF, employment assistance, medical or dental care, etc).	Family Exit Survey (16 items) Case specific questionnaire (2 items)
Appraisal support Therapy, counseling, support group, training/education services	The amount of provided therapy, counseling or support group type services (alcohol or drug abuse treatment, mental health services, parenting classes, domestic violence services, marital/family counseling, support groups, etc.).	Family Exit Survey (9 items) Case specific questionnaire (5 items)
Emotional support	Families' evaluations on the extent of workers' listening to, understanding, and respecting families	Family exit survey (4 items)
Time to first face-to-face meeting	Time from alleged child maltreatment report to caseworkers submission of first risk assessment result as a proxy	SACWIS
Positive service experiences	Family satisfaction with both provided services and the worker's approach and family's evaluation on the extent that they were involved in decision making processes Caseworker's evaluation on the extent that families were cooperative, engaged, and receiptive to help at meeting(s) with them	Family Exit Survey (5 items) Case specific questionnaire (6 items)
Service-need match	Family's evaluation on whether provided services were matched with family needs	Family Exit Survey (4 items)
Family functioning	Family's evaluation on improvement in parenting, child safety and family well-being; caseworkers' evaluation on absence of family needs	Family Exit Survey (4 items) Case specific questionnaire (8 items)
Family hardiness	The internal strengths and durability of the family	Telephone survey (20 items)
Perceived stress	Family's overall perceptions of stress in their own situations after case closure	Telephone survey (10 items)
Coping	Postive coping and social support coping	Telephone survey (28 items)

<u>Dependent variables</u> Re-reports	Case being reported and screened-in again during 6 months after the family exit	SACWIS
Recurrences	Substantiation, or indication of re-reported cases during 6 months after family exit	
<u>Control variables</u> Family characteristics		
Caregivers' ages	Continuous value of caregivers' ages	SACWIS
Number of children in the household	Continuous value of the number of children	
Number of caregivers in the household	Continuous value of the number of caregivers	
Caregivers' gender	Male, female	
Caregivers' race	White, Black, and Other	Family Exit Survey
Caregivers' ethnicty	Hispanic or Latino; Non Hispanic or Latino	
Caregivers' education	Less than high school, high school or GED, college or higher	
Household income	Seven categories of income	

4.6 Human Subjects and Institutional Review Board (IRB)

This study was reviewed and approved by the Institutional Review Board (IRB) of the University of Illinois at Urbana Champaign. Following the approved study procedure, subjects made a decision on voluntary participation with full information on the purpose of the study, the procedure, and the risk. Confidentiality was guaranteed through training interviewers and keeping data in a secure place. The consent form was also completed before the data were collected from subjects. After the larger PSSF evaluation project was reviewed by IRB at the University of Illinois at Urbana-Champaign and the Illinois Department of Children and Family Services, the current study was also reviewed and approved by the Illinois DCFS.

4.7 Method of Analysis

I used structural equation modeling (SEM) to test the proposed pathway model with weighted least squares means and variances (WLSMV) parameter estimates in Mplus Version 6.0. Structural equation modeling was a proper analysis method for the current study since it can test complex mediating mechanisms with multiple dependent variables in the process model. Since the purpose of the current study is to examine the process of the impact of differential response on child welfare outcomes, SEM is a better approach compared to conventional ordinary least squares regression. SEM can also account for measurement error by estimating latent variables (Muthen & Muthen, 2010). Unlike the commonly used maximum likelihood (ML) estimation, WLSMV can be used when variables are a mix of continuous and categorical variables and when continuous variables have a non-normal distribution. The structural equation modeling involved several steps. First, I conducted multiple imputations to utilize all observations in the data. The missing values of endogenous, exogenous and control variables

ranged from 0 to 18% by variables in use. WLSMV cannot handle missing data using missing at random (MAR), which is assumed in other estimators such as maximum likelihood (ML) or Bayesian. Thus, by doing Bayesian multiple imputations before using WLSMV, I obtained datasets without missing values first and then used WLSMV afterwards. Five data sets without missing values were created by multiple imputations in Mplus and then parameter estimates using WLSMV were averaged over the set (Muthen & Muthen, 2010). Second, I conducted confirmatory factor analysis in order to test the measurement models for latent variables (emotional support, family reported positive service experiences, caseworker reported family attitude, family reported family functioning, caseworker reported family functioning, family hardiness, positive coping, and social support coping). Third, I tested the structural model with both observed indicators and latent variables in the model with family reported data on all variables in the model. Fourth, I tested the structural model with caseworker reported data on tangible support, appraisal support, family attitude and family functioning as well as family reported data on other variables in the model.

For the measurement model, I used weighted least squares means and variances (WLSMV) parameter estimates for categorical variables, and maximum likelihood (ML) estimates for continuous variables. For the structural model, since the child safety outcome is dichotomous, I used WLSMV as the estimator. For continuous dependent/mediating variables, linear regression coefficients were produced and for categorical dependent/mediating variables, probit regression coefficients were produced. A probit regression coefficient is not as straightforward as a linear regression coefficient because it is based on a z-score (UCLA: Academic Technology Services, 2011). A one unit increase in a coefficient does not mean a

proportional increase or decrease in a z-score. A simple way to interpret a probit regression coefficient is to check the direction of the relationship between predictors and outcomes.

To assess the model fit, the Comparative Fit Index (CFI), the Tucker-Lewis Index (TLI), and the Root Mean Square Error of Approximation (RMSEA) were used. With the WLSMV estimator, the chi-square values are not exact, thus it was not considered for assessing model fit. Values greater than .90 for CFI and TLI are considered to be indicative of an adequate model fit, although values approaching .95 are preferable. Values smaller than .08 or .06 for the RMSEA support an acceptable and a good model fit (Bauer & Curran, 2011).

CHAPTER 5

FINDINGS

In this chapter, I will present the findings from descriptive analysis first, the findings from confirmatory factor analysis next, and finally the findings from structural equation modeling. Before presenting the findings, it is worth mentioning that the study sample has very limited external validity. Caregivers participating in this study are not representative of all caregivers eligible for DR both in Illinois and nationally. Among all caregivers participating in the Illinois DR evaluation, only those who filled out family exit surveys for Illinois DR evaluation and returned them were invited to the current study. Caregivers who returned the Family Exist Surveys had longer case opening durations and were more likely to have received services than those who did not return the Family Exit Survey even if they were eligible for the Illinois DR evaluation and were randomly assigned to either pathway. Also, among caregivers who returned the Family Exit Survey and expressed their interests in future studies, caregivers who participated in this current study were those who had more positive service experiences than those who returned the Family Exit Survey but chose not to participate in this study. The limited sample characteristics of this study give us caution in interpreting findings and applying them to other populations.

5.1 Descriptive Findings

Table 5.1. shows caregiver characteristics in the two pathways. Except for gender, there was no difference among caregiver characteristics between the two pathways. In the Table 5.1.

as well as following tables, 'Source' indicates who reported data- families (Family Exit Survey), caseworkers (Case Specific Questionnaire) or administrative data source (SACWIS).

Table 5.1. Caregiver and Family Characteristics

	FAR (n=190)		IR (n=183)		Source
	n	% /Mean (SD)	n	% / Mean (SD)	
Caregiver characteristics					
Race	183		190		Family Exit
Black		26.23		23.16	Survey
White		66.67		67.37	
Other		8.20		7.37	
Ethnicity	184				
Hispanic or Latino		5.52	178	10.11	
Not Hispanic or Latino		94.48		89.89	SACWIS
Gender**	178		183		
Female		85.96		94.54	
Male		14.04		5.46	
Age	176	34.96 (8.84)	183	34.45 (9.51)	
Education	183		180		Family Exit
Less than high school		20.22		16.67	Survey
High school or GED		29.51		33.33	
College or higher		50.27		50.00	
Family characteristics					
Income	170		172		Family Exit
$0-$9,999		46.47		50.00	Survey
$10,000-$19,999		23.53		18.60	
$20,000-$29,999		12.94		15.12	
$30,000-$39,999		8.24		4.07	
$40,000-$49,999		1.76		2.91	
$50,000-$59,999		2.94		3.49	
$60,000 or more		4.12		5.81	
Number of caregivers	178		183		SACWIS
One		51.68		56.83	
Two or more		48.31		43.17	SACWIS
Number of children	183	1.93 (1.14)	190	2.16 (1.33)	

** p<.01

The findings in the tables are based on the data before multiple imputation. Regarding service characteristics shown in Table 5.2., overall it seems that DR implementation was successful; there was more service provision to families in the FAR. However, times to first face-to-face meetings were longer in the FAR pathway. Information from the Family Exit Survey

and from the Case Specific Questionnaire both confirms that the families in the FAR received more support.

Table 5.2. Service Characteristics

	FAR (n=183)		IR (n=190)		Source
	n	%/Mean (SD)	n	%/Mean (SD)	
# of tangible support (0-2)***	183	.45 (.53)	190	.05 (.24)	Case Specific
# of appraisal support(0-5)***		.55 (.86)		.07 (.34)	Survey
# of tangible services(0-16)***	183	1.37 (1.59)	190	.31 (1.13)	Family Exit
# of appraisal services (0-9)***		.61 (.99)		.21 (.68)	Survey
Emotional support (0-5)	181	4.77 (.60)	186	4.53 (1.09)	
Time to first meeting (days)***	178	4.22 (2.23)	182	3.20 (3.08)	SACWIS
Case opening duration (days)***	182	71.73 (27.65)	190	38.76 (26.50)	SACWIS

*** p<.001

Regarding positive service experiences and perceived matches between services and needs, findings were mixed as shown in Table 5.3. According to caseworkers, families in the IR pathway were more cooperative and more engaged. However, this is the opposite from what families reported regarding their positive service experiences (satisfaction and involvement). Families in the FAR pathway reported higher levels of positive service experiences.

Table 5.3. Positive service experiences and perceived matches between services and needs

	FAR (n=183)		IR (n=190)		
	n	%/Mean (SD)	n	%/Mean (SD)	
Cooperative (0~3)***	158	2.53 (.53)	130	2.76 (.49)	Case
Receptive (0~3)	157	2.48 (.58)	120	2.41 (.87)	Specific
Engaged (0~3)**	156	2.45 (.60)	120	2.64 (.61)	Survey
Positive service experience(0~8)***	174	7.55 (1.01)	186	6.76 (1.87)	Family
Perceived match	155	72.90	156	72.44	Exit Survey

*** p<.001

Regarding family change outcomes in the Table 5.4., there was no difference between tracks overall but the IR pathway had more favorable results with confidence and perceived stress. However, families reported family functioning was higher among those in the FAR pathway.

Table 5.4. Family Change Characteristics

	FAR (n=183)		IR (n=190)		
	n	Mean (SD)	n	Mean (SD)	
Coping					Phone Survey
Positive coping (0~18)	182	14.19 (3.50)	188	14.39 (3.48)	
Social support coping (0~15)	183	10.48 (3.57)	190	10.74 (3.79)	
Family hardiness					
Commitment (0~24)	177	20.67 (3.31)	180	2.95 (3.58)	
Confidence (0~12)*	181	9.66 (2.24)	189	9.99 (2.37)	
Challenge (0~15)	179	11.75 (2.90)	184	12.15 (2.53)	
Control (0~9)	179	5.69 (2.10)	181	5.81 (1.88)	
Perceived stress (0~15)	180	9.60 (5.90)	187	8.29 (4.81)	
Family functioning (-1~4)***	180	2.59 (1.49)	167	1.59 (1.7)	Family Exit Survey
Family functioning (0-8)	151	7.43 (1.67)	139	7.12 (2.22)	Case Specific Survey

*p<.05, ***p<.001

Regarding re-reports and recurrences, there was no significant difference between the two pathways as shown in Table 5.5. Recurrence rates during the follow-up period were very few in both pathways.

Table 5.5. Child Safety

	FAR (n=183)		IR (n=190)		
	n	%	n	%	
Re-reports during follow-up	183	8.74	190	12.63	SACWIS
Recurrences during follow-up	183	1.63	190	2.10	

*p<.05, ***p<.001

5.2 Confirmatory Factor Analysis

Confirmatory factor analysis created latent variables including emotional support, family reported positive service experiences, caseworker reported family experiences, family reported family functioning, caseworker reported family functioning, family hardiness, perceived stress, positive coping and social coping.

Emotional support. Three indicators measuring emotional support from the Family Exit Survey were used to measure emotional support. The model fit was very good (RMSEA = .000, CFI = 1.000, and TLI = 1.000). The individual items loaded on the latent factor in the same direction; "Overall, how carefully did the caseworker listen to what you and other members of your family had to say?" (factor loading = .876, p<.001); "Overall, how well do you feel the caseworker understood you and your family's needs?" (factor loading = .775, p<.001); and "Did the caseworker recognize the things that you and your family do well?" (factor loading = .707, p<.001).

Positive service experiences by families. Exploratory factor analysis revealed that 3 individual items for satisfaction and 2 items for involvement from the Family Exit Survey loaded on one latent variable. However, in the confirmatory factor analysis, five items did not produce a good model fit with less than .9 for CFI and TLI. The item that had the lowest factor loading ("Were there things that were important to you or your family that did not get talked about with the caseworker?") was dropped, and the remaining four items created one latent variable of positive service experiences, which indicated a good model fit (RMSEA = .163, CFI = .966, and TLI = .898). The items include "How satisfied are you with the way you and your family were treated by the caseworker?" (factor loading = .808, p<.001); "How satisfied are you with the help you and your family received from the caseworker?" (factor loading = .919, p<.001); "How likely would you be to call the caseworker or the agency if you or your family needed help in the future?" (factor loading = .656, p<.001); and "How often did the caseworker consider your opinions before making decisions that concerned you and your family? (factor loading = .534, p<.001).

Positive service attitudes by caseworkers. Caseworkers' reports on families' being cooperative, receptive and engaged from the Case Specific Survey were used to measure positive service attitudes by caseworkers. The model fit was good (RMSEA = .000, CFI = 1.000, and TLI = 1.000). All three items had good factor loading at a significant levels (Cooperative, factor loading = .850, p<.001; Receptive, factor loading = .774, p<.001; and Engaged, factor loading = .950, p<.001).

Family functioning by families. Four items from the Family Exit Survey were used to measure family functioning, and the model fit was good (RMSEA = .021, CFI = .999 and TLI = .998). The four items had good factor loadings at significant levels, namely: "Overall, are you and your family are better off or worse off because of your experience with <agency>? (factor loading = .575, p<.001); "Are you a better parent because of your experience with <agency name>?" (factor loading = .824, p<.001); "Are your children safer because of your experience with <agency name>?" (factor loading = .867, p<.001); and "Are you better able to provide necessities like food, clothing, shelter, or medical services because of your experience with <agency>?" (factor loading = .704, p<.001).

Family functioning by caseworkers. Eight items from the Case Specific Questionnaire regarding family needs and whether the needs were addressed in 8 areas (material needs, substance abuse, physical health, mental health, parenting skills/discipline, domestic violence, education, social support) were used to create one latent variable, which indicated a good model fit (RMSEA = .126, CFI = .942 and TLI = .919). All items had good factor loadings at significant levels, specifically: material need addressed or did not exist (factor loading = .712, p<.001); substance abuse need addressed or did not exist (factor loading = .892, p<.001); physical health need addressed or did not exist (factor loading = .899, p<.001); mental health

need addressed or did not exist (factor loading = .783, p<.001); parenting skills/discipline need addressed or did not exist (factor loading, = .826, p<.001); domestic violence need addressed or did not exist (factor loading = .885, p<.001); education need addressed or did not exist (factor loading = .884, p<.001); and social support need addressed or did not exist (factor loading = .802, p<.001).

Hardiness. The instructions of the Family Hardiness Index (McCubbin, McCubbin, & Thompson, 1987) indicated that there are four subscales, which was confirmed by the exploratory factor analysis. The subscales are commitment, confidence, challenge and control. For the confirmatory factor analysis, I used four variables based on the respective sums of the four subscales, which resulted in a good model fit (RMSEA = .081, CFI = .986 and TLI = .959). The four indicators also had good factor loadings at significant levels (Commitment, factor loading = .725, p<.001; Confidence, factor loading = .688, p<.001; Challenge, factor loading = .821, p<.001; and Control, factor loading = .362, p<.001).

Perceived stress. Six items were selected to create a latent variable of perceived stress based on the exploratory factor analysis as explained previously in the "Variables and measures" section. In the confirmatory factor analysis, the model fit was good (RMSEA = .108, CFA = .971 and TLI = .951). The factor loadings of individual items were also good at significant levels, as follows: "How often have you been upset because of something that happened unexpectedly?" (factor loading = .617, p<.001); "How often have you felt that you were unable to control the important things in your life?" (factor loading = .661, p<.001); "How often have you felt nervous and stressed" (factor loading = .561, p<.001); "How often have you found that you could not cope with all the things that you had to do?"(factor loading = .576, p<.001); "How often have you been angered because of things that were outside of your control?" (factor loading = .660,

p<.001); and “How often have you felt difficulties were piling up so high that you could not overcome them?” (factor loading = 1.730, p<.001).

Positive coping. Using items from Brief COPE, the exploratory factor analysis indicated 3 different factors on which the individual items loaded. I called the first factor “positive coping,” since the items that loaded on this factor included subscales of active coping, reframing, planning, and acceptance. In the confirmatory factor analysis the model fit (RMSEA = .083, CFA = .963 and TLI = .939) and the factor loadings were good, and the latter were statistically significant. The items included “I've been concentrating my efforts on doing something about the situation I'm in” (factor loading = .679, p<.001); “I've been taking action to try to make the situation better” (factor loading = .623, p<.001); “I've been trying to see it in a different light, to make it seem more positive” (factor loading = .538, p<.001); “I've been trying to come up with a strategy about what to do” (factor loading = .765, p<.001); “I've been accepting the reality of the fact that it has happened” (factor loading = .613, p<.001); and “I've been thinking hard about what steps to take” (factor loading = .693, p<.001).

Social support coping. Based on the exploratory factor analysis, social support was another factor measuring coping, and the subscales of emotional support, instrumental support and reframing loaded on that factor. In confirmatory factor analysis, the model fit was good (RMSEA = .075, CFA = .987 and TLI = .974). The factor loadings were good at significant levels, namely: “I've been getting emotional support from others” (factor loading = .823, p<.001); “I’ve been getting help and advice from other people” (factor loading = .818, p<.001); “I've been getting comfort and understanding from someone” (factor loading = .789, p<.001); “I've been looking for something good in what is happening” (factor loading = .518, p<.001); and “I’ve

been trying to get advice or help from other people about what to do" factor loading = .728, p<.001).

5.3 Structural Equation Modeling

5.3.1 The Base Model

After confirmatory factor analysis, I created a base model for structural equation modeling as shown in Figure 5.1. In the section referred to as "Family change" in the model, I entered 5 family change variables (functioning, family hardiness, perceived stress, positive coping, and social support coping) one by one. For each model, I used two different child safety outcomes (re-reports and recurrence) as well as two data sources (families' and caseworkers' reports on tangible, appraisal support, positive service experiences/attitudes and family functioning). This produced 4 models for each of the five models with different family change variables. I controlled for caretakers' ages, household income, number of children in the household and caretakers' ethnicities in the model when I examined the relationships between FAR pathway and tangible, appraisal, emotional support and time to first face-to-face meeting.

The model depicted in Figure 5.1. did not have a good model fit, as indicated by the CFI and TLI values, which were below .9, a cut-off point for a reasonably good model fit. Using model modification indices in M-plus, I created a revised model, which contained more pathways, as shown in Figure 5.2 with dashed lines. The model fit for the revised model improved significantly reaching around .9 for the CFI and TLI, although the actual fit values varied across different models with different family change variables, two child safety outcomes, family reported data and caseworker reported data. In addition to the pathways, I allowed for the

residuals of tangible and appraisal support to co-vary. The remaining SEM analysis used this revised model.

Following the base model, I present findings from the SEM models with five different variables of family change (family functioning, family hardiness, perceived stress, positive coping, and social support coping). In each model of the 5 models measuring a different aspect

Figure 5.1. Model for structural equation modeling

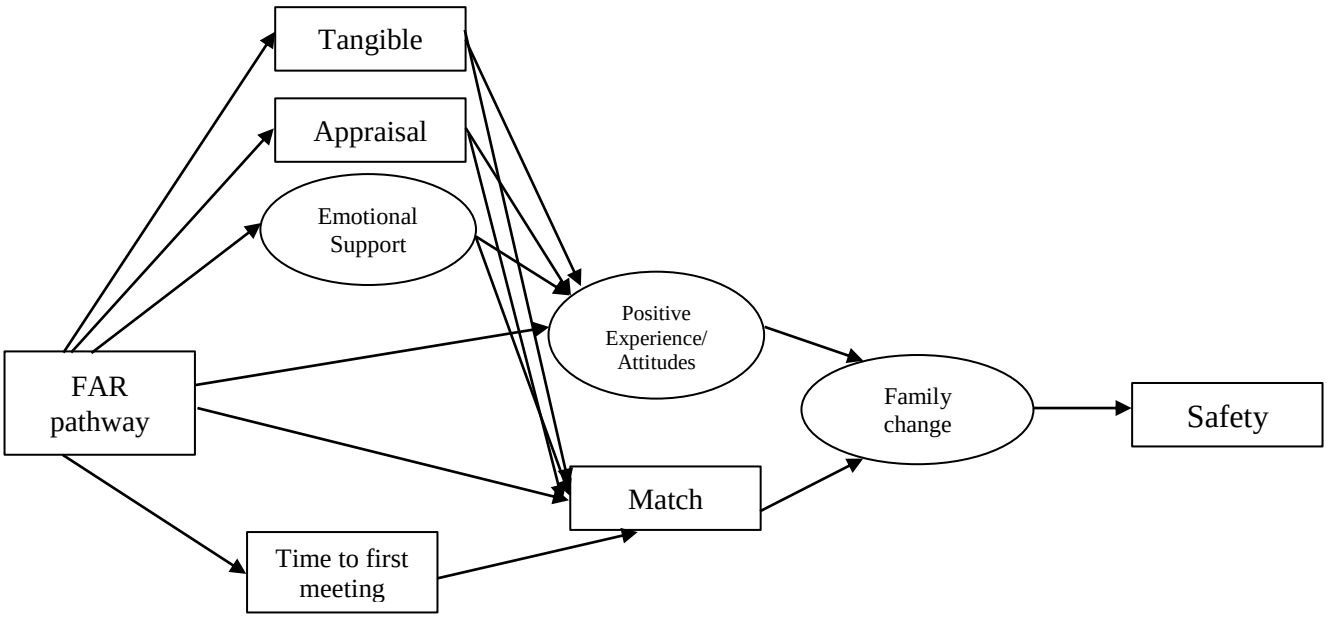
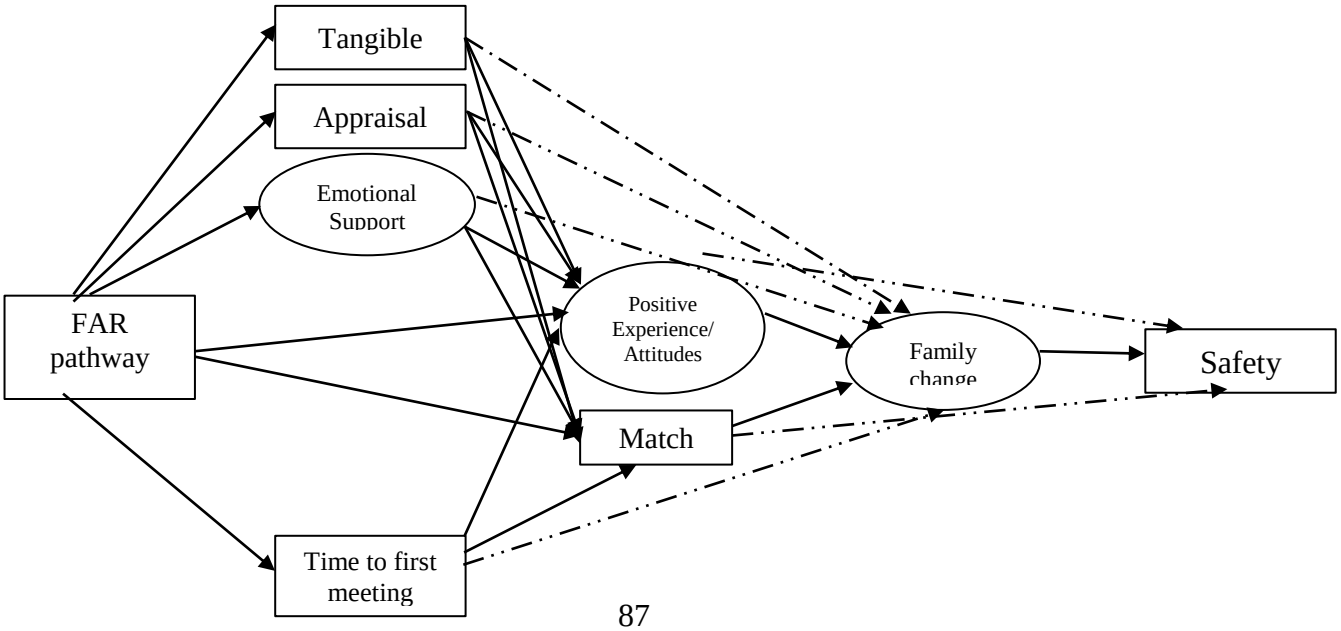


Figure 5.2. Revised model for structural equation modeling



of family change, 4 models were created, 2 child safety outcomes (re-report and recurrence) and 2 data types (family reported and caseworker reported). I selectively present some of the models here due to a large number of models. I present models that show significant relationships with child safety outcomes as well as models with more significant relationships compared to those not presented here. Families and caseworkers reported separately on the number of tangible supports, the number of appraisal supports, and positive service experiences/attitudes and family functioning. Families reported on positive service experiences and caseworkers reported on positive service attitudes. Positive service experiences variable was used when family reported data were entered in the model. Positive service attitudes variable was used when caseworker reported data were entered in the model. Some variables had only one data source (random assignment, time to first meeting, perceived matches, family hardiness, perceived stress, positive coping, social support coping, and covariates of income, race, the number of children, and caretaker age) and they remained the same across different models.

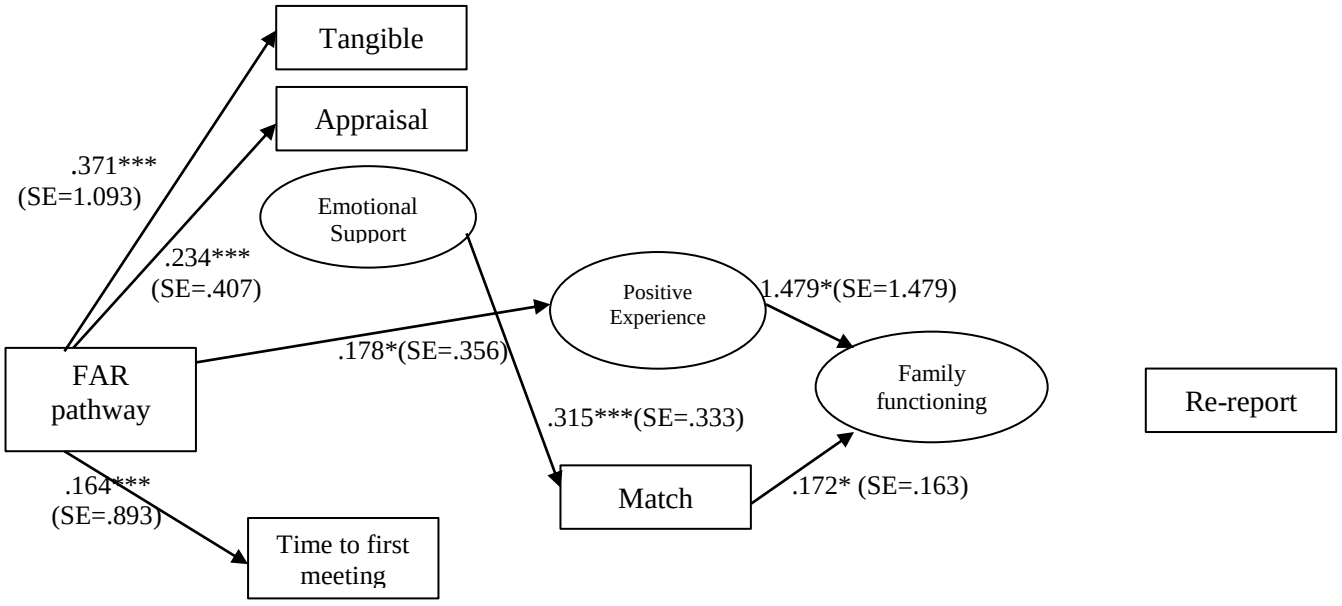
5.4 Family Functioning

For the base model measuring family change as family functioning, 4 sub-models with two safety outcomes (re-report and recurrence) and two data sources (family reported data and caseworker reported data) were estimated.

Family reported data. Using the base model, family reported data along with family reported positive service experiences variable were entered in the model with child safety outcomes of re-reports first. The significant relationships are shown in solid lines in Figure 5.3., and insignificant relationships are not presented. The model fit index was good (RMSEA = .037, CFI = .910, and TLI = .888). The FAR pathway increased tangible and appraisal support, but delayed

first meetings with caseworkers. The FAR pathway increased positive service experiences directly. Perceived matches between needs and services increased when there was more emotional support. Increased positive service experiences and perceived matches improved family functioning. Among the covariates, household income was negatively associated with tangible support (β=-.118, p<.05, SE=-1.102); caretaker age was negatively associated with tangible support (β=-.099, p<.05, SE=-.016,); the number of children in the household was positively associated with tangible support (β=.086, p<.05, SE=.102). Also, the number of children in the household was negatively associated with time to first face-to-face meetings, meaning the more children there were, the quicker the face-to-face meeting took place after the initial report (β=-.172, p<.01, SE=-.376). White caregivers also had quicker face-to-face meetings after the initial report than caregivers identified as Other race (β=-.160, p<.05, SE=-.927). The residual terms of tangible support and appraisal support co-varied significantly in a positive direction (γ=.389, p<.001, SE=.442).

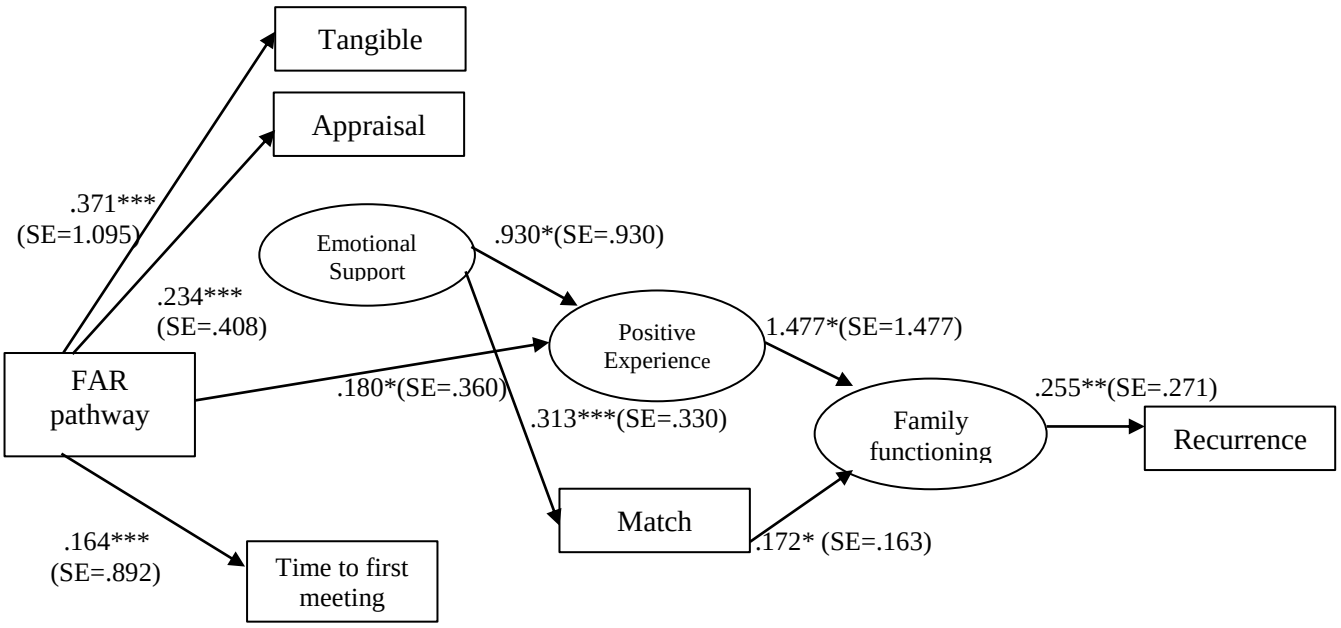
Figure 5.3. Family functioning with data reported by families and with re-report



*p<.05, **p<.01, ***p<.001

The recurrence variable was entered in the same base model as shown in Figure 5.4. The model fit index was good (RMSEA = .037, CFI = .909, and TLI = .878). As shown in Figure 5.4, the significant relationships are very similar to those in Figure 5.3.. The only differences are that emotional support increased positive service experiences; improved family functioning increased recurrence. The direction between improved family functioning and recurrence is in an

Figure 5.4. Family functioning with data reported by families and with recurrences



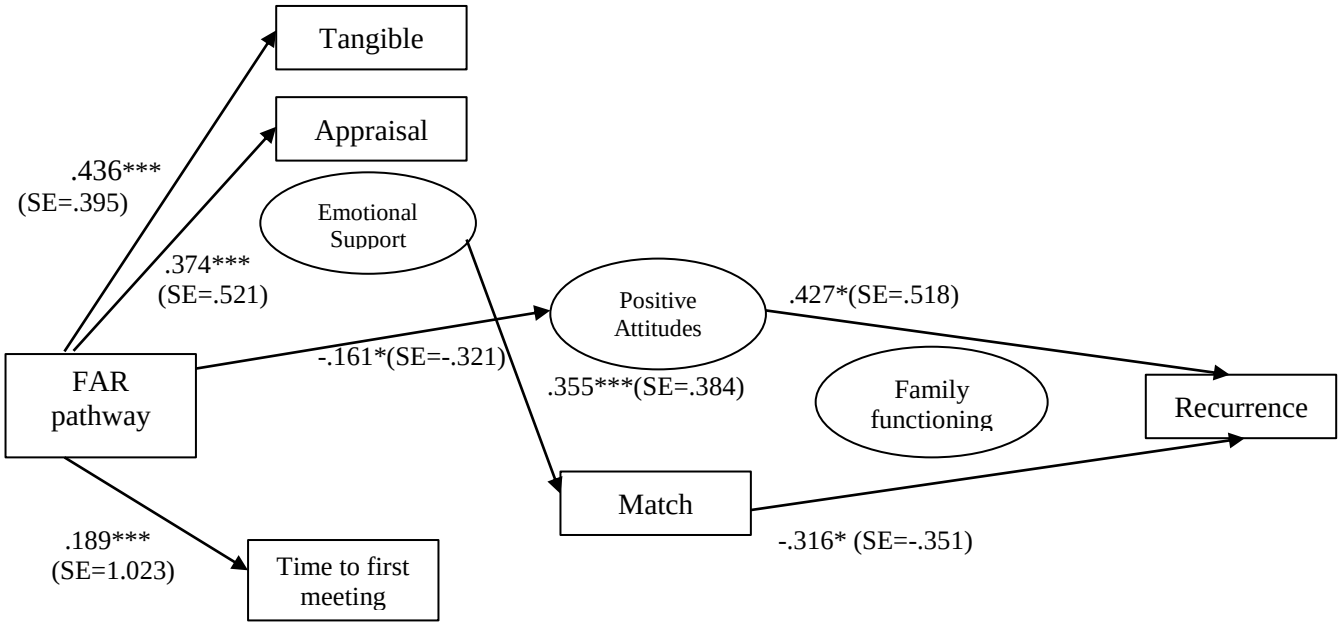
*p<.05, **p<.01, ***p<.001

unexpected direction the higher the family functioning was, the more recurrence occurred. Same covariates were significant with almost identical coefficients as those in Figure 5.3.

Caseworker reported data. Caseworker reported data along with positive service attitudes were entered in the same base model. The model used caseworker reported tangible support, appraisal support, positive family service attitudes (cooperative, receptive, and engaged), and family functioning. Other variables remained the same. Two models were created with re-reports and recurrences. The model with recurrence is presented in Figure 5.5. The model with re-report had almost the same model fit values and significant relationships among variables except for not

having a significant relationship between positive service attitudes and child safety outcomes (re-report). The model in Figure 5.5. with recurrence had good model fit (RMSEA = .032, CFI = .928, and TLI = .910). The assignment to the FAR pathway increased tangible and appraisal support, and reduced caseworker reported positive service attitudes. Increased positive service attitudes increased recurrence. Emotional support increased perceived matches and perceived matches reduced recurrence. Differing from models with family reported data, perceived matches between services and needs and positive service attitudes predicted child safety outcomes.

Figure 5.5. Family functioning with data reported by caseworkers and with recurrence



*p<.05, **p<.01, ***p<.001

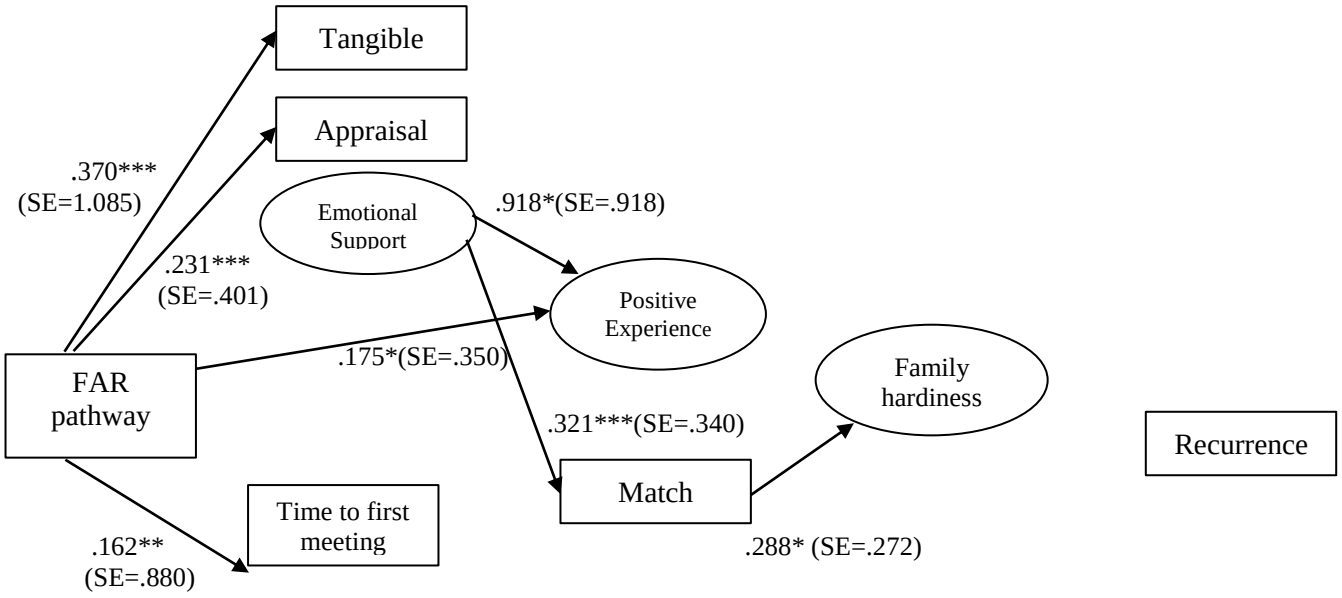
Perceived matches predicted both re-reports (β=-.354, p<.01, SE=-.350) and recurrences (β=-.316, p<.05, SE=-.351). Positive family attitudes predicted recurrence but in an unexpected direction (β=.427, p<.05, SE=.518). Among the co-variates, caretaker age was negatively associated with tangible support (β=-.101, p<.05, SE=-.005,). Also, the number of children in the household was negatively associated with time to first face-to-face meetings (β=-.171, p<.05,

SE=-.372). The residual terms of tangible support and appraisal support co-varied significantly in a positive direction (γ=.234, p<.001, SE=.060).

5.5 Family Hardiness

Family reported data. Family hardiness and re-reports were entered in the base model along with family reported data on tangible support, appraisal support, and positive service experiences. Recurrences were entered for another model with same other variables. Both models were almost the same except small differences in model fit values and coefficients. The model with recurrence had slightly better model fit values; CFS and TLI were higher by .01, and the coefficients were almost identical. The significant relationships among the constructs in the model with recurrence as the dependent variable are shown in Figure 5.6. The model with re-report as a dependent variable is not presented here because the two models are almost equal in their model fit values and significant relationships among variables and coefficients. The model in Figure 5.6 had a good model fit (RMSEA = .030, CFI = .943, and TLI = .925). The relationships among variables are almost the same as those in Figure 5.3., which used family functioning with family reported data and re-report. The only difference is that positive service experience did not predict family change outcomes, or family hardiness in this model. Among the co-variates, the number of children in the household was positively associated with tangible support (β=.088, p<.05, SE=.104). Also, the number of children in the household was negatively associated with time to first face-to-face meetings (β=-.161, p=.01, SE=-.352). The residual terms of tangible support and appraisal support co-varied significantly in a positive direction (γ=.391, p<.001, SE=.442).

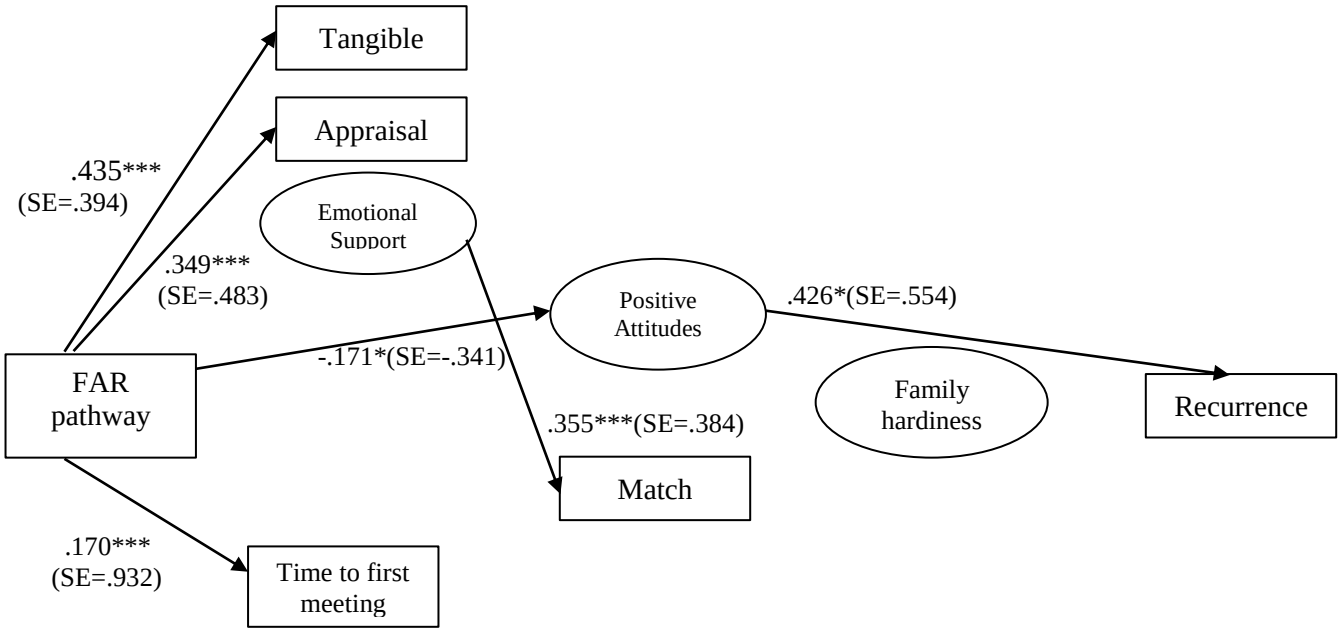
Figure 5.6. Family hardiness with data reported by families and with recurrence



*p<.05, **p<.01, ***p<.001

Caseworker reported data. The model depicted in Figure 5.7. had a good model fit (RMSEA = .031, CFI = .931, and TLI = .901). Similar to the model presented in Figure 5.5, which measured family functioning with caseworker reported data and recurrence, positive family service attitudes predicted recurrence in an unexpected direction (β=.426, p<.05, SE=.554). The model with re-report is not presented here but it has the same findings as Figure 5.7 except not having a significant relationship between positive service attitudes and re-report. Among the covariates, caretaker age was negatively associated with tangible support (β=-.102, p<.05, SE=-.005). Also, the number of children in the household was negatively associated with time to first face-to-face meetings (β=-.165, p<.05, SE=-.365). The residual terms of tangible support and appraisal support co-varied significantly in a positive direction (γ=.237, p<.001, SE=.061).

Figure 5.7. Family hardiness with data reported by caseworkers and with recurrence



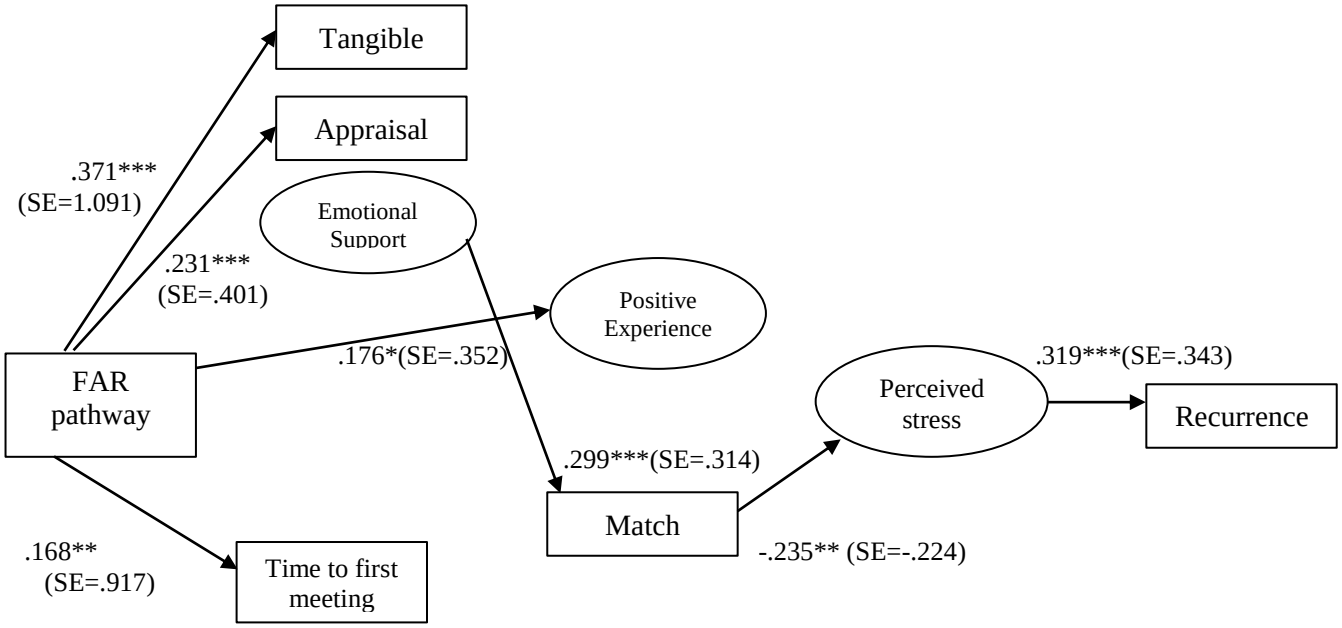
*p<.05, **p<.01, ***p<.001

5.6 Perceived Stress

Family reported data. Perceived stress and re-reports were entered in the base model along with family reported data on tangible support, appraisal support, and positive service experiences. Recurrences were entered for another model with these same other variables. The model with recurrence is presented in Figure 5.8. Both models were almost the same except that the model with re-reports does not have a significant relationship between perceived stress and child safety outcomes (re-reports) as well as a significant relationship between the FAR pathway assignment and positive service experiences. The significant relationships of the model with recurrence are shown in Figure 5.8. The model had good model fit (RMSEA = .030, CFI = .943, and TLI = .927). The relationships among variables are almost the same as Figure 5.3., measuring family functioning with family reported data and re-reports. The only difference is

that positive service experience did not predict family change outcomes nor perceived stress in the current model. Also, the relationship between perceived stress and recurrence was in the

Figure 5.8. Perceived stress with data reported by families and with recurrence



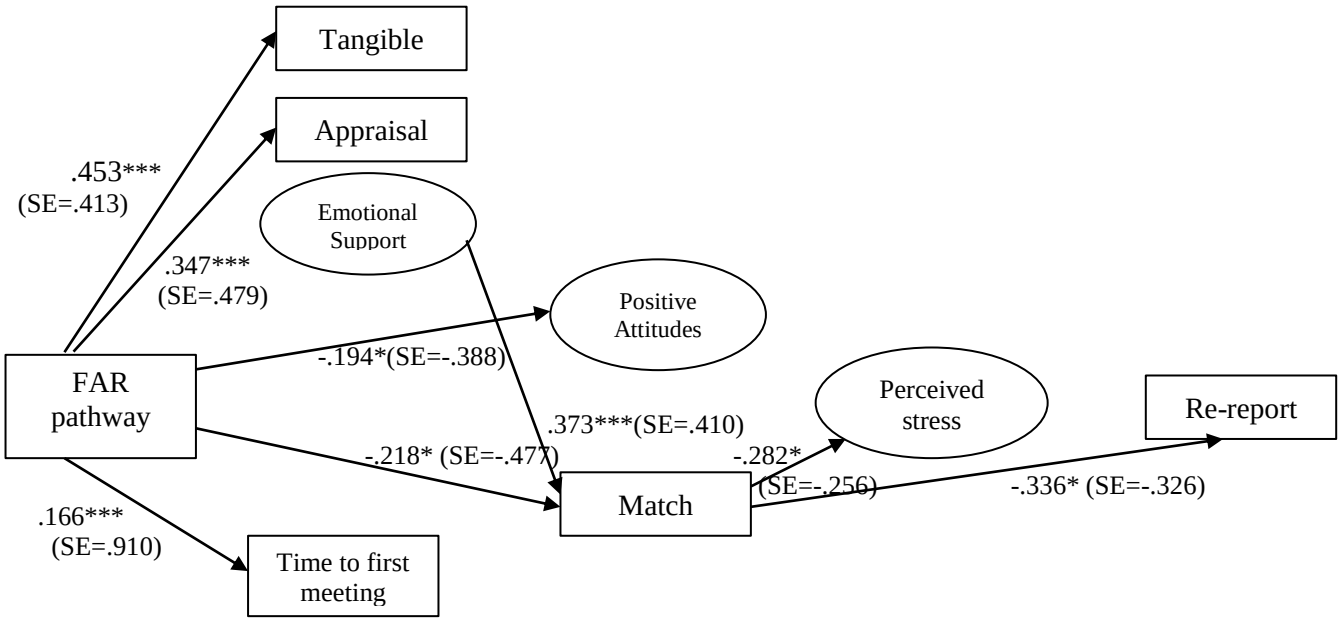
*p<.05, **p<.01, ***p<.001

expected direction. Perceived matches reduced perceived stress; more perceived stress predicted more recurrences. Among the co-variates, the number of children in the household were positively associated with tangible support (β=.082, p<.05, SE=.098). Also, the number of children in the household was negatively associated with time to first face-to-face meetings (β=-.169, p=.01, SE=-.374). The residual terms of tangible support and appraisal support co-varied significantly in a positive direction (γ=.391, p<.001, SE=.442).

Caseworker reported data. Caseworker reported data were entered in the base model that included tangible support, appraisal support, and positive service attitude (cooperative, receptive, and engaged) along with perceived stress. Two models were created with re-report and recurrence as the dependent variables. The model with re-report is presented in Figure 5.9. The model with recurrence had almost the same findings except had a significant relationship

between positive service attitudes and child safety outcomes (recurrence) (β=.455, p<.05, SE=.571), had a significant relationship between perceived stress and recurrence (β=.303, p<.01, SE=.378), and did not have a significant relationship between perceived match and recurrence. The model presented in Figure 5.9. had a good model fit (RMSEA = .032, CFI = .924, and TLI = .900). Similar to the model depicted in Figure 5.5 that used family function with caseworker reported data and recurrence, perceived matches predicted re-reports in a negative direction. Differing from other models, the FAR pathway reduced perceived matches. Among the co-variates, caretaker age was negatively associated with tangible support (β=-.102, p<.05, SE=-.037). Also, the number of children in the household was negatively associated with time to first face-to-face meetings (β=-.173, p<.05, SE=-.381). The residual terms of tangible support and appraisal support co-varied significantly in a positive direction (γ=.236, p<.001, SE=.061).

Figure 5.9. Perceived stress with data reported by caseworkers and with re-report

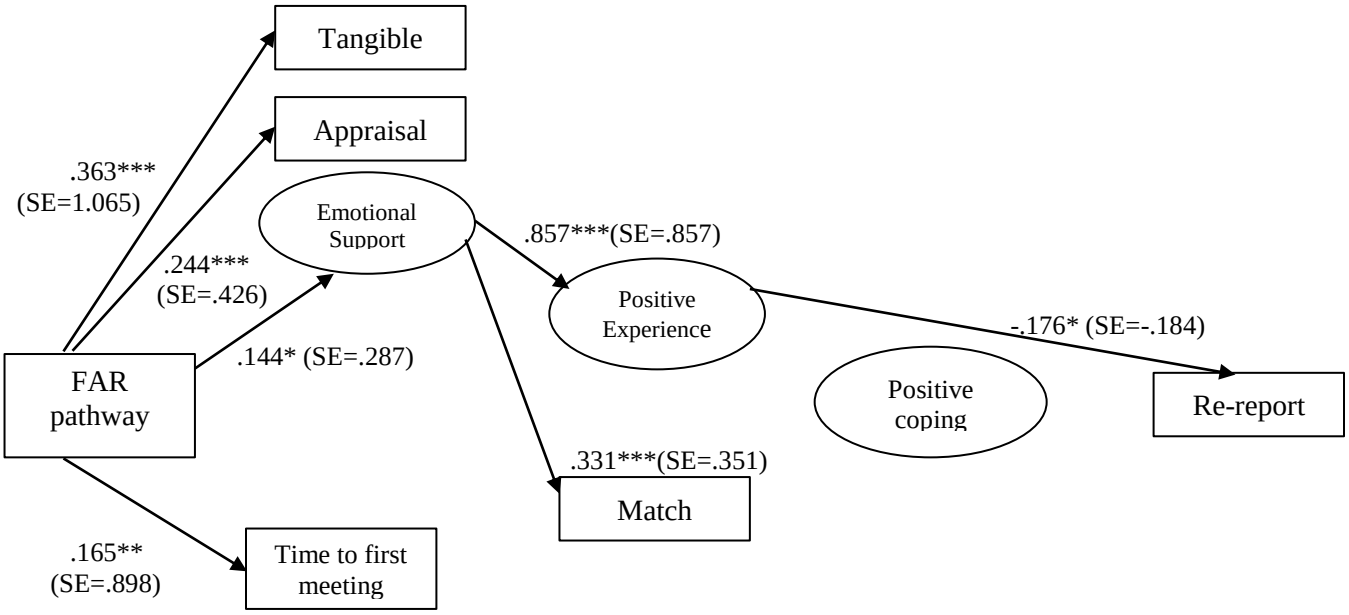


*p<.05, **p<.01, ***p<.001

5.7 Positive Coping

Family reported data. Positive coping and re-report were entered in the base model along with family reported data on tangible support, appraisal support, and positive service experiences. Recurrences as the dependent variable was entered in the other model with the same other variables. The model with re-reports is presented in Figure 5.10. Both models were almost the same except that the model with recurrences does not have a significant relationship between positive service experiences and child safety outcomes (recurrence). The significant relationships of the model with recurrences are shown in Figure 5.10. The model had a good model fit (RMSEA = .033, CFI = .916, and TLI = .895). Differing from the rest of the models previously presented, assignment to the FAR increased emotional support. Among the co-variates, the number of children in the household was positively associated with tangible support (β=.090, p<.05, SE=.106). Also, the number of children in the household was negatively associated with time to first face-to-face meetings (β=-.166, p=.01, SE=-.363); caregivers being White was

Figure 5.10. Positive coping with data reported by families and with re-report

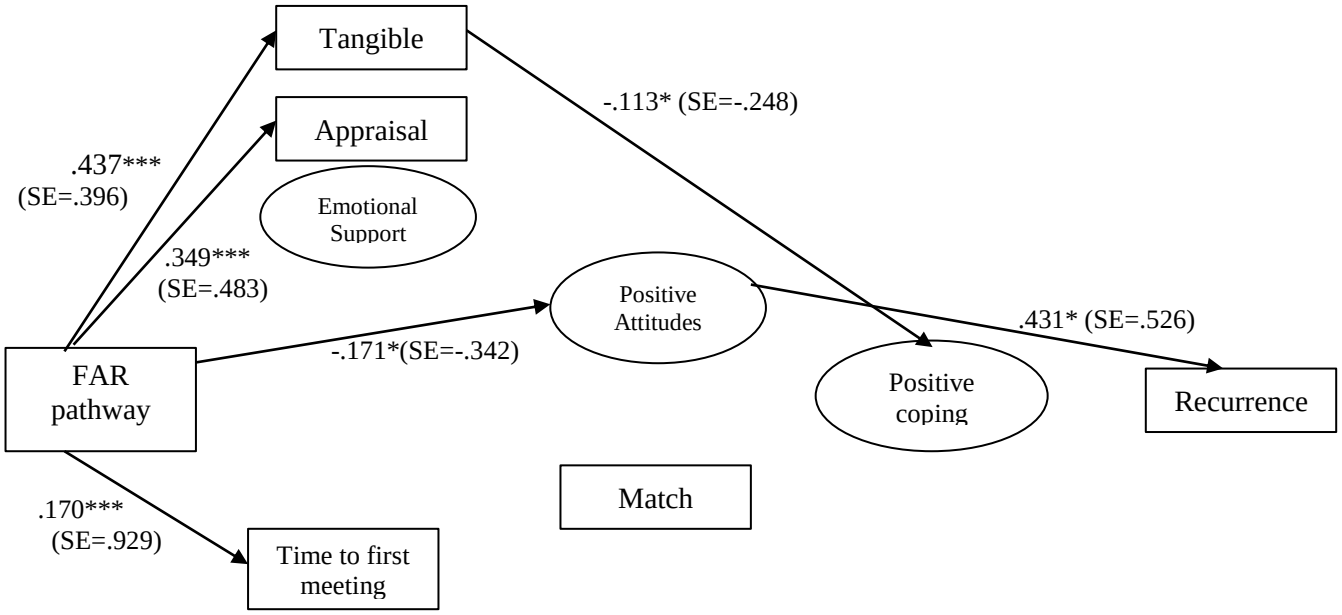


*p<.05, **p<.01, ***p<.001

negatively associated with time to first face-to-face meetings (β=-.154, p=.05, SE=-.890). The residual terms of tangible support and appraisal support co-varied significantly in a positive direction (γ=.390, p<.001, SE=.441).

Caseworker reported data. Caseworker reported data were entered in the base model on tangible support, appraisal support, and positive family attitude (cooperative, receptive, engaged) along with positive coping. Two models were created with re-report and recurrence as the dependent variables. The model with recurrence is presented in Figure 5.11. The model with re-report had almost the same findings except for not having a significant relationship between positive service attitudes and child safety outcomes (re-report). The model depicted in Figure 5.11 had a good model fit (RMSEA = .024, CFI = .945, and TLI = .928). Differing from all the other models previously presented, more tangible support reduced positive coping. Also, more positive attitudes increased recurrences similar to the model presented in Figure 5.5. Among the co-variates, caretaker age was negatively associated with tangible support (β=-.105, p<.05, SE=-.

Figure 5.11. Positive coping with data reported by caseworkers and with recurrence



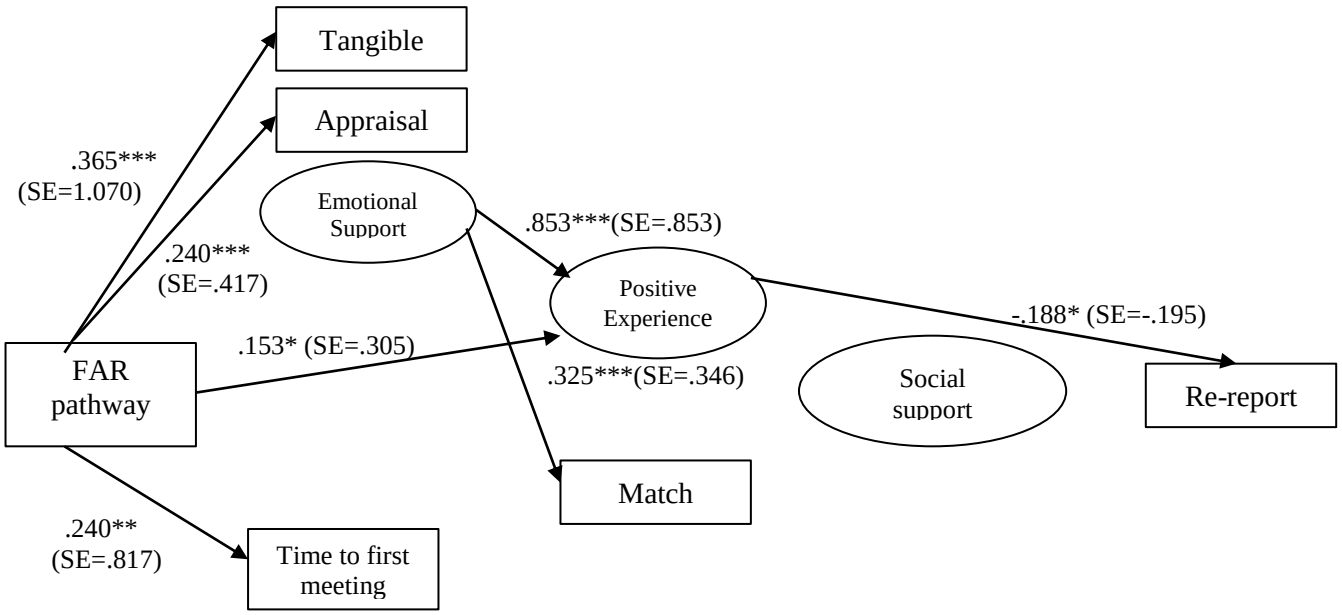
*p<.05, **p<.01, ***p<.001

005). Also, the number of children in the household was negatively associated with time to first face-to-face meetings (β=-.168, p<.05, SE=-.370). The residual terms of tangible support and appraisal support co-varied significantly in a positive direction (γ=.240, p<.001, SE=.060).

5.8 Social Support Coping

Family reported data. Social support coping and re-reports were entered in the base model along with family reported data on tangible support, appraisal support, and positive service experiences. Recurrence was entered as the dependent variable in another model with the same other variables. The model with re-reports is presented in Figure 5.12. Both models were almost the same except that the model with recurrence does not have a significant relationship between positive service experiences and child safety outcomes (recurrence). The significant relationships of the model with re-reports are shown in Figure 5.12. The model had good model fit (RMSEA = .039, CFI =.906, and TLI = .877). Among the co-variates, the number of children in the household was positively associated with tangible support (β=.088, p<.01, SE=.104). Also,

Figure 5.12. Social support coping with data reported by families and with re-report

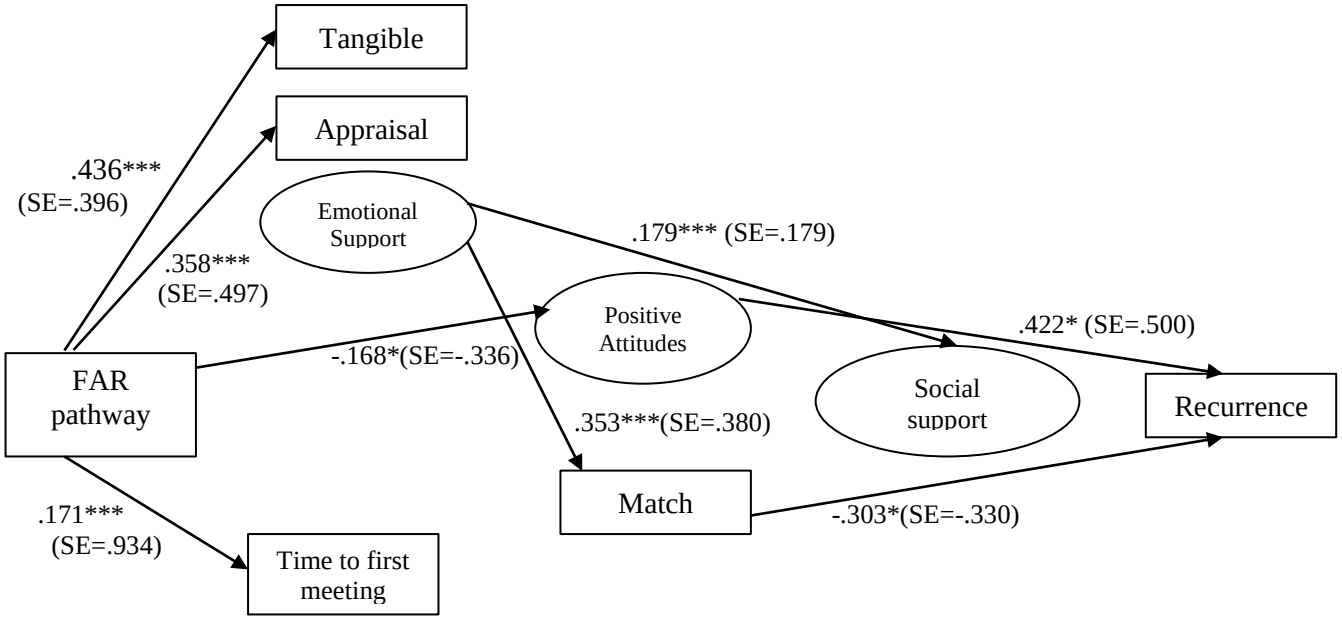


*p<.05, **p<.01, ***p<.001

White caregivers was negatively associated with time to first face-to-face meetings (β=-.160, p=.05, SE=-.926). The residual terms of tangible support and appraisal support co-varied significantly in a positive direction (γ=.390, p<.001, SE=.441).

Caseworker reported data. Caseworker reported data were entered in the base model including tangible support, appraisal support, and positive family attitudes (cooperative, receptive, and engaged) along with social support coping. Two models were created with re-reports and recurrences as the dependent variables. The model with recurrences is presented in Figure 5.13. The model with re-reports had almost the same findings except for not having a significant relationship between positive service attitudes and child safety outcomes (re-report). The model in Figure 5.13 had good model fit (RMSEA = .031, CFI = .918, and TLI = .890). Perceived matches decreased recurrence and more positive attitudes increased recurrence. Differing from other models, emotional support directly impacted social support coping in a positive direction. Among the co-variates, caretaker age was negatively associated with tangible

Figure 5.13. Social support coping with data reported by caseworkers and with recurrence



*p<.05, **p<.01, ***p<.001

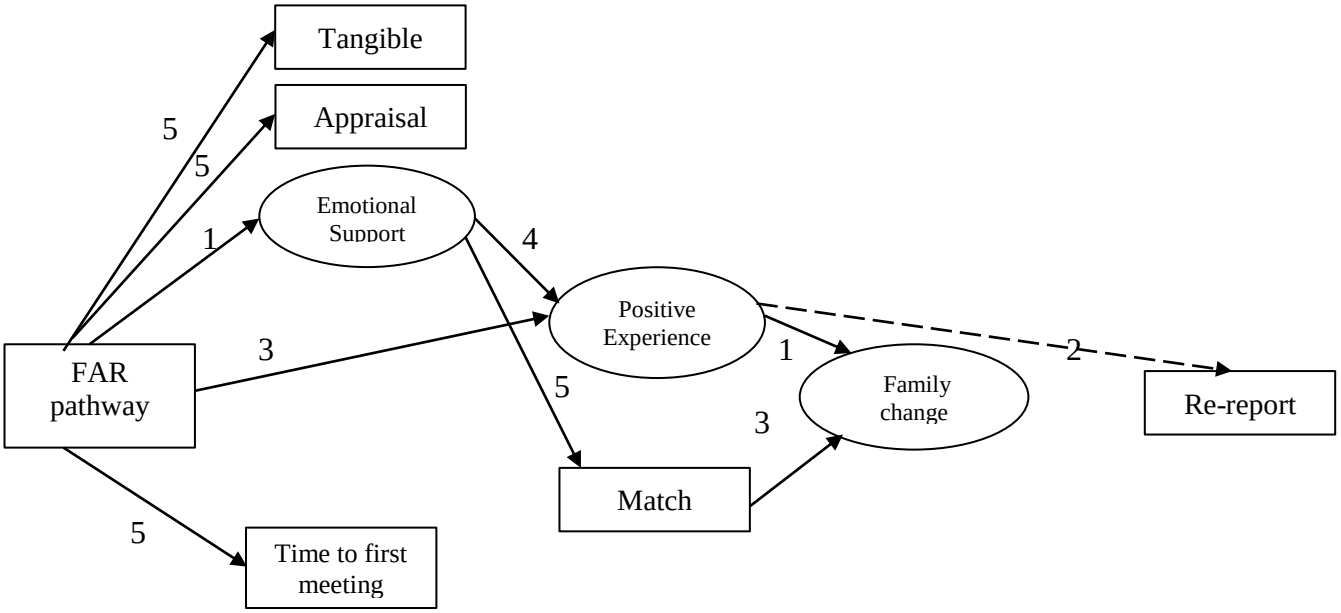
support (β=-.100, p<.05, SE=-.005). Also, the number of children in the household was negatively associated with time to first face-to-face meetings (β=-.172, p<.05, SE=-.380). The residual terms of tangible support and appraisal support co-varied significantly in a positive direction (γ=.240, p<.001, SE=.060).

5.9 Summary of Findings

Re-report. Figure 5.14. and Figure 15.5. show the summary of findings from the models with re-report as the dependent variable. Figure 5.14 is the summary of five models with re-report, five family change variables (including family reported family functioning) and family reported tangible, appraisal support, and positive service experiences as well as other variables in the model. Figure 5.15 is the summary of five models with re-report, five family change variables (including caseworker reported family functioning) and caseworker reported tangible, appraisal support, and positive service attitudes as well as other variables in the model. The solid lines depict significant relationships among the hypothesized relationships, and dotted lines demonstrate significant relationships not hypothesized but found through the revised models. The numbers are the frequency of significant relationships between two variables in five models summarized in the figure. In Figure 5.14., which used family reported data, among the co-variates, household income decreased tangible support, caregiver age decreased tangible support, and the number of children in the household increased tangible support. Also, the number of children and the caregiver being White, compared with Other, decreased time to first face-to-face meetings after the initial report. Some relationships were less frequent than others. The FAR

pathway increased emotional support in one model; Positive service experiences increased family reported family functioning but not other family change variables.

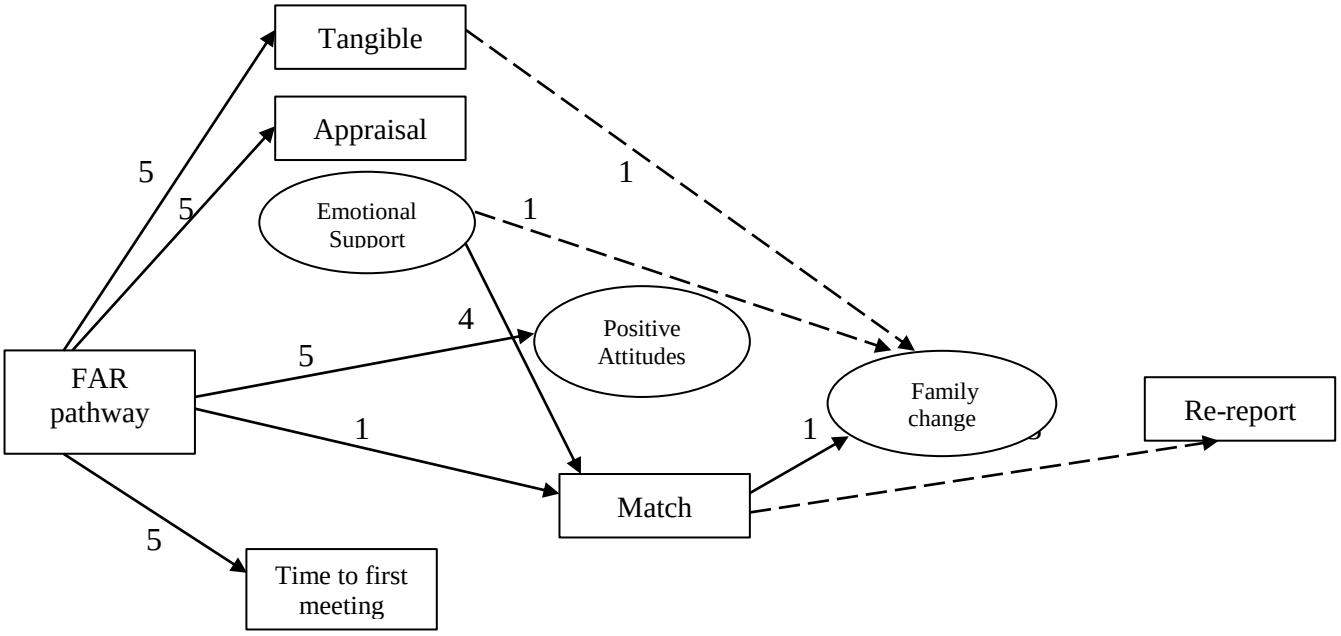
Figure 5.14. Summary of findings with data reported by families and re-report



In Figure 5.15., which used caseworker reported data, among the co-variates, caregiver age decreased tangible support. Also, the number of children decreased time to first face-to-face meetings between a worker and a family after the initial report. In Figure 5.15, caseworker reported positive service attitudes lost significant relationships with emotional support, family changes and re-reports. Tangible support reported by caseworkers affected one of the family change variables, positive coping, but the direction was unexpected. More tangible support reported by caseworkers reduced positive coping. The FAR pathway reduced perceived matches in one model, the one with perceived stress. Perceived matches reduced re-reports. Emotional support increased one of the family change variables, social support coping. The FAR pathway assignment, perceived matches and emotional support depicted in Figure 5.14. and Figure 5.15. are the same variables since they have only one source of data, the Family Exit Survey. The relationship between perceived matches and re-reports and between emotional support and social

support coping appear significant in Figure 5.15. when some other variables were entered based on caseworker reports.

Figure 5.15. Summary of findings with data reported by caseworkers and re-report



Recurrence. Figure 5.16. and Figure 15.7. show the summary of findings from the models with recurrence as a child safety outcome. Figure 5.16 is based on family reported data and Figure 5.17 is based on caseworker reported data. Significant co-variates in Figure 16 are the same as those in Figure 5.14, and significant co-variates in Figure 17 are the same as those in Figure 5.15. In Figure 5.16, similar to Figure 5.14, positive service experiences increased one of family change variables, family reported family functioning. In Figure 5.17, caseworker reported positive service attitudes lost significant relationships with emotional support and family changes. However, it gained a significant relationship with recurrence; the direction of the relationships is unexpected. When there were more positive service attitudes of families, as reported by caseworkers, there were more recurrences. This is the same on models with re-report as the outcome, tangible support affected one of the family change variables, positive coping, but the direction was unexpected. More tangible support reported by caseworkers reduced positive

Figure 5.16. Summary of findings with data reported by families and recurrence

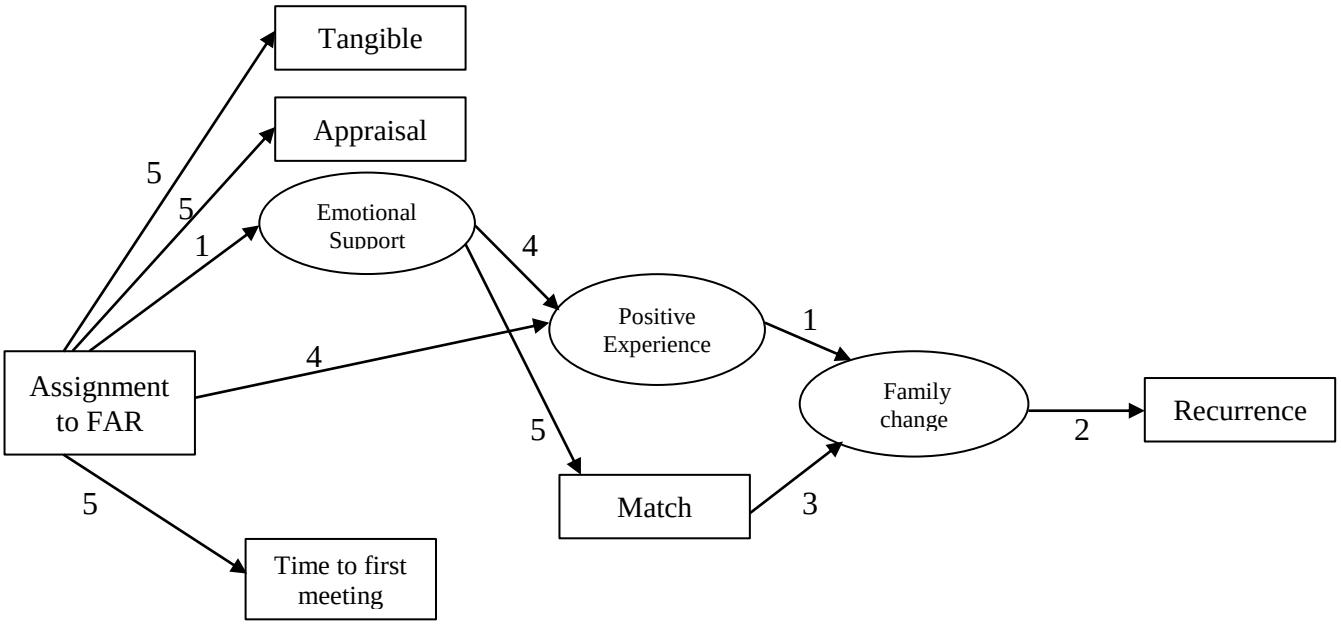
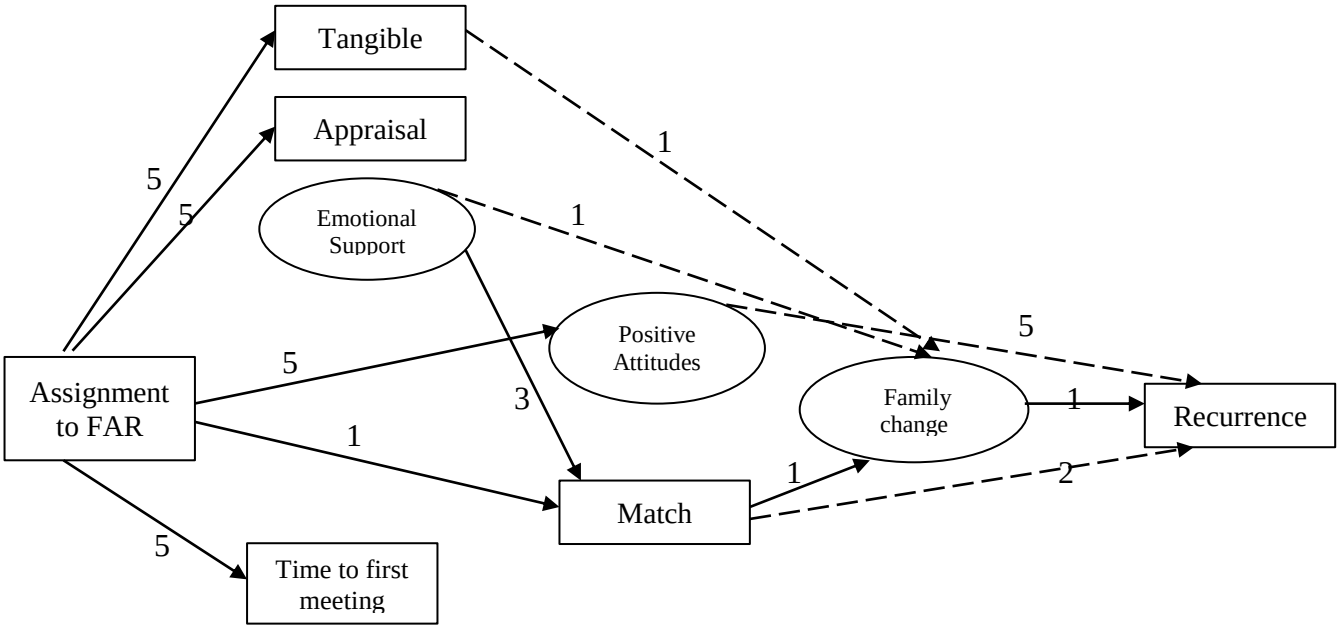


Figure 5.17. Summary of findings with data reported by caseworkers and recurrence



coping. Perceived matches reduced recurrence. Emotional support increased one of the family change variables, social support coping. The relationship between one of the family change

variables, perceived stress and recurrence was stable across two models. More stress increased recurrence.

In summary, there were two variables predicting re-reports, family reported positive service experiences and perceived matches. When families reported more positive service experiences and perceived matches, re-reports were reduced. There were three predictors of recurrence, perceived matches, perceived stress and caseworker reported families' service attitudes. When families reported better matches and reduced stress, recurrence was reduced. When caseworkers reported more positive family service attitudes, recurrence increased.

There were two predictors of family reported positive service experiences and two predictors of perceived matches. When families were assigned to the FAR pathway and when they received more emotional support, families reported more positive service experiences. When families were assigned to the FAR pathway, they perceived fewer matches. When families received more emotional support, they reported better matches. Family reported positive service experiences and perceived matches also increased family changes (family reported family functioning, family hardiness, reduction of perceived stress).

There were some similarities as well as discrepancies in findings between models based on family reported data and caseworker reported data. Both families and caseworkers reported that families in the FAR pathway received more tangible and appraisal support. Also, both families and caseworkers reported that the FAR pathway assignment affected families' positive service experiences or attitudes. However, the directions were different; families reported that assignment to the FAR pathway increased their positive service experiences, but caseworkers reported that assignment to the FAR pathway decreased caregivers' positive attitudes. Although positive service experiences (satisfaction and involvement) and attitudes (cooperation,

receptiveness, and engagement) did not use the exactly same survey questions, these two contrasting views on families' experiences with CPS involvement are worth putting in comparison. Caseworker reported that positive attitudes were also not associated with emotional support and family changes. It predicted recurrence but in an unexpected direction. When caseworkers report more positive family service attitudes, recurrence was more likely. Caseworkers reported tangible support decreased positive coping and families reported tangible support did not affect any family change variables.

CHAPTER 6

DISCUSSION

In this chapter, I discuss how the findings supported five hypotheses, additional findings based on modified process model introduced in the Figure 5.2, implications for practice and policy, and the limitations of the study. I finish the chapter with a conclusion and the suggestions for future studies.

This study aimed to examine whether DR has a positive impact on child welfare outcomes such as re-reports and recurrences. This study also aimed to reveal the process of the effectiveness of DR on reduction of child maltreatment re-reports and recurrences by examining the service components and workers' approach in DR as well as family experiences and changes. The findings indicated that the DR doesn't affect child safety outcomes, but regardless of the pathways, families' positive service experiences and perceived matches between services and needs predicted reduced re-reports and recurrence. Also, emotional support from caseworkers appeared to be important for families' positive service experiences and matches. The study has five hypotheses, and I discuss the findings more in detail with each hypothesis.

As to the first hypothesis, the findings only partially support that families in the experimental group (the FAR pathway) receive more tangible, appraisal and emotional support and receive support more quickly than families in the control group (the IR pathway). The findings indicate that families in the FAR pathway in Illinois PSSF received more tangible support and appraisal support. However, being assigned to the FAR pathway doesn't appear to provide more emotional support. Although there were a few models showing that the FAR

pathway provided more emotional support (a model with positive coping), the majority of the models did not show that relationship. Thus, we need to take caution in concluding that the FAR provides more emotional support to families. Also, families in the FAR had their first meeting with a caseworker later than those in the IR. The time to their first meeting used a proxy variable that measured time between pathway assignment and caseworkers' online entry of first safety assessment results. Time to the first meeting was longer for families in the FAR pathway. However, this is understandable when considering the IR workers were required to investigate cases within 24 hours while the FAR workers could wait up to 3 days to the first contact after setting up meetings with families.

The findings of more tangible and appraisal support imply that Illinois DR had been implemented as planned. More service provision is a key component of DR and both families and caseworkers agreed there was more tangible and appraisal support for families in the FAR pathway. However, the differences in the number of tangible support and appraisal support were not large despite the statistically significant difference; about .5 to 1 more support received in the FAR pathway according to family report and about .5 more support received in the FAR pathway according to caseworker report. This might be the reason that tangible support and appraisal support did not had indirect impact on child safety outcomes through positive service experiences/attitudes or perceived matches as well as family changes in the process model.

As to the second hypothesis, the findings were mixed in supporting that families in the experimental group have more positive service experiences/attitudes between family reports and caseworker reports; findings did not support better matches between needs and services among families in the FAR pathway than those in the IR pathway. According to families' reports, families in the experimental group had more positive service experiences than those in the

control group. However, according to caseworkers' reports, families in the control group had better attitudes than those in the experimental group. Families report on positive service experiences included their satisfaction with the help of the caseworker, and their involvement in case management. Caseworker reports on positive family attitudes were focused on how cooperative, receptive to help and engaged families were. It is very interesting that families' reports and caseworkers' reports on families' experiences in CPS involvement do not match. It is possible that whereas families were more satisfied with the non-adversarial and strength-based approach in the FAR pathway, families were not characterized by caseworkers as more cooperative, receptive and engaged than those in the IR pathway where caseworkers used an investigative approach. In an investigative approach, caseworkers have power over caregivers. They decide the investigation disposition, mandated service involvement or child out-of-home placement. Caregivers can be resistant or pretend to cooperate in the unbalanced power relationship (Dumbrill, 2006). It is possible that families showed more positive attitudes to caseworkers with an investigative approach to manage through the investigation process, but they would have actually felt more satisfied and involved in the non-investigative approach when there was no concern for power relationships and they were free to say "no" to caseworkers. It is also important to remember that caseworkers were not randomly assigned to either of the pathways in this study but volunteered to work in the FAR pathway or the IR pathway, meaning that workers in the two pathways could be systematically different in many aspects. For example, if families engaged in similar behaviors, caseworkers' judgments on family attitudes might have been different. It is also possible that IR caseworkers had compensatory rivalry against DR workers trying to prove that IR was as good as or an even better approach for CPS involved families. All these explanations are possible given the voluntary nature of worker-pathway

assignments and their knowledge and awareness of Illinois DR evaluation on their work and child safety outcomes.

Another finding regarding the second hypothesis was that families in the FAR did not experience better matches between services and needs than those in the IR. It is interesting that families in the FAR were more satisfied with the help, caseworkers and their involvement, but they did not perceive better matches. Rather, in two models in which caseworker data were entered, the FAR pathway decreased perceived matches between services and needs. Confirmatory factor analysis found that positive service experiences and matches are two separate factors. It is clear that even though the FAR pathway provided families with more positive service experiences, it did not provide better perceived matches between services and needs. It is interesting to notice that even when services were not matched with their needs, families in the FAR pathway were still more satisfied and involved. It seems that families differentiated general satisfaction from the help as well as the approach from judgments on whether what they received really addressed their needs. One of possible interpretation of higher likelihood of mismatch in the FAR pathway might be related to more involvement in case management process. Caregivers in the FAR pathway seem to have been more involved, which means they probably expressed their opinions on what services they needed more than those in the IR pathway. However, small difference in the number of services that families actually received between pathway means that caregivers in the FAR pathway ended up being more aware of what service needs; they did have those needs addressed to the extent that they could perceive to be enough at the end of case closure. On the other hand, since caregivers in the IR pathway have not been more engaged in the service provision plan, they might not have thought as much as those in the FAR pathway about what service needs they have; they might have been

less aware of what service needs were not addressed by CPS involvement. This means that they could perceive more matches because they have not much needs nor service receipt; on the other hand, those in the FAR pathway might have perceived more mismatch between what they need and what they did not receive.

As to the third hypothesis, findings minimally supported that more tangible, appraisal, emotional support and a timelier first meeting with a caseworker may help explain more positive service experiences and better perceived matches between services and needs. Only emotional support increased positive service experiences and perceived matches among three support types (tangible, appraisal, and emotional) and time to the first meeting. This might imply the greater importance of emotional support and relatively lower importance of tangible and appraisal support. It should also be worthwhile to remember that the amount of tangible and appraisal support was very minimal in this study. Families received only one or less than one service for tangible and appraisal support. Emotional support measured how much caseworkers listened to, understood, and recognized families.

As discussed in hypothesis 2, assignment to the FAR pathway did not predict more emotional support. Instead, the FAR pathway directly increased positive service experiences. I speculate that although the amount of emotional support in the two pathways was not different in the findings of hypothesis 2, there might be differences in caseworkers and caregiver relationships between the two pathways. Emotional support was measured only with 3 items, and they might not have captured the full nature of caseworker-caregiver relationships or caseworkers' approaches. DR is known to be distinguished from the traditional CPS approach in two ways, first, more services, and second, a non-adversarial approach. The fact that the amount of emotional support was not different in the two pathways but assignment to the FAR pathway

predicted more positive service experiences seem to imply that there was a difference in workers' approaches not captured with the emotional support variable in this study. However, it is also possible that some other characteristics of the FAR increased positive service experiences such as the non-investigative approach where caregivers could feel more powerful than in the traditional investigative approach, although there was the same level of emotional support in the two pathways.

As to the fourth hypothesis, findings partially supported that family reported positive service experiences and the matches between needs and services help explain improved family functioning, family hardiness, reduced perceived stress, and improved ability to cope at the time of case closure. Family reported positive experiences increased family reported family functioning. Perceived matches increased family reported family functioning and family hardiness. Perceived matches also reduced perceived stress. Neither family reported positive service experiences nor perceived matches increased positive coping or social support coping. Coping might play a moderator role when positive service experiences impact family changes rather than being an outcome of family change (Lewis & Kliewer, 1996). Caseworker reported positive family attitudes did not predict any family change outcomes. Family reported positive service experiences helped explain family change better than caseworker reported positive family attitudes. Perceived matches helped explain family change better than positive service experiences. For actual changes within families, perceived matches seem more important than positive service experiences.

Even when hypothesis 4 was supported, pathways from the FAR pathway to family changes were not forming on one lone pathway with mediating variables all significant. For example, in the model with family reported family functioning (Figure 5.3 and Figure 5.4.), the

FAR pathway directly increased family reported positive service experiences and positive service experiences increased family functioning. However, although perceived matches increased family reported family functioning, the FAR pathway did not directly or indirectly impact perceived matches. Also, emotional support increased perceived matches, but the FAR pathway did not have any effect on emotional support in that model. The same is true for the model with family hardiness (Figure 5.6.) and the model with perceived stress (Figure 5.8.). Perceived matches increased family hardiness, but only emotional support was related to perceived matches.

In other words, regardless of which pathway families were assigned to, when they had more emotional support from caseworkers, families perceived better matches, and then matches increased family hardiness, less perceived stress and better family functioning. The exception is family reported family functioning where the FAR pathway mattered since it directly increased positive service experiences which in turn increased family functioning.

As to the fifth hypothesis, findings were mixed regarding whether family functioning, family hardiness, perceived stress and the ability to cope help explain re-reports and recurrences. Perceived stress increased recurrences or reduced perceived stress decreased recurrences. Family reported functioning was associated with recurrence in an unexpected direction. The higher family functioning was, the more families had recurrences. Family hardiness did not affect re-reports or recurrences or the ability to cope. A positive relationship between family reported functioning and recurrence is perplexing, and there might be at least two possible interpretations. First, families were simply not capable of assessing their changes in improvement properly. The indicators for family reported functioning were mainly about how much better off the family, or a parent was, or the ability to provide necessities to their children, and how much safer their

children were. Families' assessments on their improvement in functioning or safety might be biased especially among families whose functioning did not improve. Second, there might be a measurement error with the utilized items. There were some respondents who marked yes to the questions asking whether their family, themselves, and their children are better off due to their experience with the child welfare agency, but put a note saying things like 'I am always a good parent', or 'My children are always safe'. This means either that CPS involvement did not really help them to become better or even if it did, these parents rejected acknowledging that their situation was worse before the involvement with the caseworker. In both cases, their answer (yes) doesn't match how they are (no positive change before and after the CPS involvement). Considering that structural equation modeling accounts for measurement error due to some respondents' misinterpretation of items, the first explanation with respondents' bias looks like a better interpretation of the findings.

Even when hypothesis 5 was supported, pathways from the track assignment to child safety outcomes were not smoothly formed along pathway mediators. For example, when perceived stress increased recurrences, the assignment to the FAR pathway did not matter. Caregivers with more emotional support perceived better matches and it reduced stress; reduced stress in turn reduced recurrence.

There were interesting findings from the pathways not in the original hypotheses but added and tested through the revised model. First, among the models with family reported data, the models with positive coping and social support, positive service experiences reduced re-reports. In the model with positive coping (Figure 5.10.), the pathway started from assignment to the FAR pathway and increased emotional support; increased emotional support in turn increased family reported positive service experiences, and positive service experiences reduced re-reports.

In the social support coping model (Figure 5.12.), it started from the assignment to the FAR pathway and increased family reported positive service experiences; increased positive service experiences in turn directly reduced re-reports.

Second, when caseworker reported data were used, better perceived matches between services and needs by a family reduced recurrences. This relationship did not show up significantly in the models with family reported data although they have the same variable of perceived matches. Perceived matches reduced recurrence in three models, that is, Figure 5.5. (caseworker reported family functioning), Figure 5.9.(perceived stress) and Figure 5.13.(social support). However, it was emotional support that increased perceived matches, not the FAR pathway assignment, so only pathways from emotional support through matches to recurrence were complete.

Third, caseworker reported positive family attitudes predicted more recurrence. This direction was the opposite of what we usually expect. However, the findings in several models (Figure 5.5., Figure 5.13. and three other models not presented but tested) showed that caseworker reported positive family attitudes increased recurrence. In these models, the FAR pathway assignment reduced caseworker reported positive family attitudes. The pathway from the FAR pathway assignment to recurrence was complete, but the directions among variables were the opposite from the expected. The FAR pathway reduced caseworker reported positive family attitudes and reduced positive family attitudes reduced recurrence. In other words, families in the FAR had less positive attitudes and they had less recurrence. It is possible that caseworkers' assessment of family attitudes was biased especially among those in the IR pathway. It is also possible that families at higher risk of recurrence show more pretended cooperation, engagement or receptiveness in an attempt to end the CPS involvement as early as

possible. It is also possible that families showing more positive attitudes ended up not receiving much help with services or support from caseworkers who judged that there was less need based on families' positive attitudes and the result became worse than those who received services. In all cases, it doesn't seem that caseworker reported families' positive attitudes is a good predictor of recurrence.

The findings discussed above suggest issues for practice and policy implications. First, mismatches between families' and caseworkers' reports on family experiences with CPS involvement and the differing directions in their prediction of child safety outcomes invite us to further discussion. Whereas caseworkers reported higher levels of cooperation and engagement in IR families, families in the FAR pathway reported higher satisfaction and involvement. The number of services received or provided was relatively easy to count which had no disagreement between caseworkers and families. On the other hand, service experiences/attitudes were very subjective and whose opinion is more valuable/reliable is debatable. In this current study, positive service experiences reported by families had a predicting power on positive family change as well as reduction of re-reports. Perceived matches by families predicted reduced recurrence. Caseworker reported positive service attitudes, on the other hand, predicted increased recurrence. This means that at least among families at low-risk, the families' own judgment on services and their experiences might be worth paying attention to in order to predict re-reports. Current interests in family engagement also stand in the same line of valuing and listening to families' voices in child welfare practice. From needs assessments, service plans and service goals, to evaluation of services, practitioners and policy makers can open more opportunities to families so that their voices are heard more deeply and they become more engaged. However, it is also worth noting that family reported family functioning predicted increased recurrence which

means families' opinions on their own family outcomes or child safety are biased. It might be recommended that caseworkers listen to families' voices on service provisions and case management but not necessarily put families' judgment on improvement on family and child outcomes above caseworkers'.

Second, it seems that DR does not have an impact on re-report or recurrence through mediating variables in the model. A few models showed that DR reduced perceived matches, and a few other models showed that DR increased positive service experiences. These mixed findings make it hard to conclude on the impact of the DR on the child welfare outcomes. This is disappointing but consistent with previous literature on the DR that found the DR does not compromise child safety. Previous studies that reviewed the DR evaluation reports haven't found that the DR improves child safety (Loman et al., 2010; NQIC 2011; NQIC, 2009). However, this does not mean that the traditional CPS approach with one response of investigation to all cases should be policy makers' choices. There are a lot of factors to consider when it comes to which approach is more effective in helping families. As to child safety, it seems that the DR does not produce a great positive impact, but as to family satisfaction and involvement, the current study as well as previous studies found that the DR is preferred by families. The cost of the DR also needs to be considered and weighed against its strengths. Depending on stakeholders' values on CPS involvement in families' lives and different outcomes as well as difficulties in the DR implementation, decision on the adoption of the DR can be made.

Third, positive service experiences and perceived matches are important for family change and child safety. Regardless of the track assignment, more family reported positive service experiences and perceived matches increased positive family change and reduced re-reports and recurrences. This implies that families' experiences and perception of services need

to be valued more than or at least as much as the opinions of anyone else such as a caseworkers in service provision and service evaluation. What they receive might be less important than how they receive or how they perceive and take what they have received. Family Stress Theory supports the importance of families' perceptions of the balance between the demands and resources (McCubbin & Patterson, 1983). In other words, what services mean to families in the context of the demands in their lives matters. It is possible that families receive some services but do not recognize them as their resources for different reasons such as mismatches in the amount or the types of services. The insignificant relationship between tangible and appraisal support, and positive service experiences and perceived matches in this study might be due to this reason. Also, provided services seem not to have addressed families' needs.

Policy makers and practitioners seem to need to develop a more family centered policy and practice approach. Some strategies for more engagement include involving/engaging families more in service evaluation and case closure as well as needs assessment and service planning in DR. According to the Double ABCX Theory, it is critical that families perceive that they can keep the balance between demands in their lives and resources and master how to cope with their situations (McCubbin & Patterson, 1983). This should be true when service provision is ended and cases are closed.

Fourth, emotional support is important for positive service experiences and perceived matches. Emotional support increased positive service experiences and perceived matches which in turn impact family changes, re-reports and recurrences. How much families are listened to, understood and recognized might have more impact on families than the number of actual services they received. Child welfare workers need to develop skills in order to be equipped to provide emotional support in their interaction with caregivers. Training or workshops can be

offered to caseworkers for continuing education and professional development. Right amounts of case-loads would be also recommended for caseworkers so that they can be emotionally supportive. The level of emotional support that caseworkers provide must vary depending on the risks of the cases or the levels of threat to safety within families. It would not be wise to provide emotional support to any alleged perpetration regardless of the level of risk or alleged maltreatment types. However, it seems critical to recognize families as partners or agents of change rather than to criminalize and control them.

6.1 Limitations

The current study has at least several limitations. First, this study has limited external validity. The study sample is not representative of all caregivers eligible for DR both in Illinois and nationally. Among all caregivers participating in Illinois DR evaluations, only those who filled out family exit surveys for Illinois DR evaluation and returned them were invited to the current study. About 20-30 percent of all caregivers participating in Illinois DR returned the Family Exit Survey of Illinois DR evaluation. Among them, only those who expressed their interests in the future study were invited to the current study and about 50-60 percent voluntarily agreed to participate in the current study. Caregivers who participated in this study were those who had more positive service experiences than those who returned the Family Exit Survey but chose not to participate in this study. Caregivers who returned the Family Exist Surveys also had longer case opening durations and were more likely to have received services than those who did not return the Family Exit Survey. Also, Illinois DR have different characteristics from other states despite shared elements. For example, only neglect cases without any previous CPS report were eligible and different caseworkers were assigned to two pathways based on voluntary

decisions and training in Illinois DR. There might be other differences between Illinois DR and other states' such as CPS workers characteristics or availability and quality of services from community organizations. Illinois DR share eight core elements that defines DR (Merkel-Holguin et al., 2006) which allow us to apply findings of this study to other populations. However, differences in implementation and the limited sample of this study give us caution in interpreting findings and applying them to other populations.

Second, this study used unstandardized survey items to measure some of the variables in the model such as emotional support, positive family service experiences, and perceived matches. A reliability test (Cronbach alpha test) and a validity test (confirmatory factor analysis) were conducted, but more items for each variable from a standardized measurement tool could have been more reliable and valid. For example, emotional support was measured with only 3 items and positive family service experiences were measured with 4 items. Perceived matches used only one item. Whereas confirmatory factor analysis and Cronbach alpha tests were conducted for emotional support and positive service experiences, they were not utilized for perceived matches.

Third, this study did not consider some factors within and beyond family systems that could influence family change, and child maltreatment re-reports and recurrences. Although this study utilizes an experimental design, research hypotheses also examines relationships among variables regardless of the pathway assignment. To account for confounding variables, various individual and family factors were considered, but there are some factors not considered such as children's ages (Bae et al., 2009; Fluke et al., 2008) since the unit of analysis was a family, not a child or children. Family structure (Fuller et al., 2001) was not considered due to limited information in the CPS data system. Also, beyond family environments, this study did not

consider community factors such as poverty and social disorganization (Coulton, Crampton, Irwin, Spilsbury & Korbin, 2007; Drake et al., 2006) that can be related to child maltreatment re-reports and recurrences.

Fourth, this study has limited causality among variables in the process model. Emotional support and positive service experiences as well as tangible, appraisal support and perceived matches were measured with caregivers' memory or caseworkers' memory. They might have some errors in their memory. Also when families recalled both emotional support and positive service experiences, they might not have been able to separate their memories on these variables but mix them up. That is, when they were not satisfied, they might have recalled and reported caseworkers not providing emotional support even if caseworkers had provided it in reality. Family change variables were not controlled and we do not know how families were before CPS involvement. It is possible that families using positive coping or social support coping experienced CPS involvement more positively and perceived better matches between services and needs. This puts a threat to causal relationship between positive experiences, matches and family changes.

Fifth, this study followed up families involved in DR for 6 months after case closure. This might not be long enough to examine the impact of the different pathway assignments and family change.

Sixth, this study only considered CPS reported child maltreatment for re-reports and recurrences. Non-CPS reported child maltreatment might have occurred again after the initial report but was not considered in this analysis.

6.2 Conclusion and Suggestions for Future Studies

Despite some limitations, this study contributed to the understanding of the impact of the DR on child safety and the process of the DR. The DR did not have an impact on child safety but families' subjective service experiences and perceived matches appeared to be critical to reduce re-reports and recurrences regardless of the pathway assignment. Emotional support was important for both positive service experiences and perceived matches that in return reduced re-reports and recurrences regardless of the pathway assignment. Practices and policies that are more family engaging are recommended based on the findings of this study.

Future studies can address the limitations of this study and build a deeper understanding of the impact of DR on child safety. If data permit, a comparison study across different states implementing DR would be informative about how both similarities and differences of DR in different states affect safety outcomes. For example, a future study can examine whether emotional support as well as tangible and appraisal support increased families' service experiences across different states. Future studies also can examine how positive service experiences and perceived matches lead families to reduced re-reports and recurrences directly. These relationships seem to be critical, but the process of these relationships was not revealed in this study. Predictors of positive experiences and matches would also be an interesting topic for future studies since these variables predicted child safety outcomes. This study found that emotional support is critical, but other predictors might include family characteristics such as the level of stressful events or informal support that families have. Service provider characteristics such as ethnicity or experiences/skills can also be considered. Longer term impacts of DR on re-reports and recurrences with extended follow-up periods are also what future studies need to examine.

Despite some core elements of the DR shared across different states, the implementation of the DR as well as CPS practice in different states vary. The findings of this study need to be taken into consideration along with the evaluation studies of other states for policy and practice regarding the DR.

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APPENDIX A

INITIAL RECRUITING LETTER

Dear Caregiver,

You recently filled out a survey about Illinois Department of Children and Family Services (DCFS) and showed an interest in participating in additional research opportunities. Given your interest, we would like to invite you to be part of a related study conducted by Jiyoung Kang, a doctoral student at the Children and Family Research Center, School of Social Work at the University of Illinois at Urbana-Champaign under the direction of Dr. Tamara Fuller. In this study, we are very interested in learning about changes in you and your families' stress and support after meeting with child welfare workers (from DCFS and other agencies). We like to know how helpful they were in helping you to manage stressful situation and in avoiding additional contacts with DCFS.

You don't have to do anything right now. In the next few weeks, **an interviewer will call you** to ask if you want to participate in a telephone interview. If you want to participate, the interviewer will ask you several questions about things like how you and your family handle stressful situations, support you have after meeting child welfare workers as well as difficulties you had before meeting child welfare workers. The interview will take about **40 minutes.**

Answering questions in the telephone interview involves very little risk to you, although there might be some questions you don't wish to answer. You can refuse to answer any questions or stop the interview at any time. Your participation is completely voluntary. Your decision about participation will not make any influence on your benefits from DCFS or any government agencies now as well as in the future.

After the interview, we will combine information from your telephone interview with two kinds of information – first, the survey you recently filled out about the DCFS and second, the record in DCFS system about whether your family is contacted again. However, all information you provided us and in the system will remain **confidential**. Your name is taken off from all records and we link information only by ID. We will never link your name with any of information. Also, your answers will be combined with the answers of others in the study and reported in a summary form. However, if we are told that a child is now being abused and neglected, at risk of harm to self or others, we are required to report this to DCFS by law. The results from the study will be used for a doctoral dissertation as well as academic journals.

As a way of saying "Thank You!" for helping us with this study, we will provide a $15 Wal-Mart gift card. Even if you do not complete an entire interview, you will still receive the $15 gift card.

For your information, we attach a telephone survey questionnaire that shows you what questions the interviewer will ask. The "Informed Consent" explains your rights as a person participating in the study. The interviewer will remind you of both the informed consent and read you survey questionnaire at the interview.

If your phone is not in service any more or the number has recently changed, or if you have any questions about the study, please feel free to contact the investigators, Jiyoung Kang (phone: 217-265-7865, email: kang30@illinois.edu) or Tamara Fuller (phone: 217-333-5837, email: t-fuller@illinois.edu).

Your help with our study is really appreciated.

Very truly yours,

Jiyoung Kang, M.A., Ph.D. Candidate
Children and Family Research Center
School of Social Work
University of Illinois at Urbana-Champaign

FOLLOW-UP RECRUITING LETTER

Dear Caregiver,

This is **a reminder of recent invitation** to doctoral student, **Jiyoung Kang's dissertation** research. **We tried to reach you at your phone number** that you provided to the Children and Family Research Center but we were **not successful**. Your Family Exit Survey about Illinois Department of Children and Family Services (DCFS) showed us your interest in participating in future studies and we hope you would be still interested. Jiyoung Kang is a doctoral student at the Children and Family Research Center, School of Social Work at the University of Illinois at Urbana-Champaign. Under the direction of Dr. Tamara Fuller, she wants to learn from you about changes in you and your families' stress and support after meeting with child welfare workers (from DCFS and other agencies). She wants to see how helpful DCFS was in helping you to manage stressful situation without any re-contacts with DCFS.

If you want to help Jiyoung with her dissertation, **please fill out the survey and the consent form** and **mail those two back to Jiyoung**. The questions on the survey are about how you and your family handle stressful situations, support you have after meeting child welfare workers as well as difficulties you had before meeting child welfare workers. It will take **30-40 minutes**.

Answering questions in the survey involves very little risk to you, although there might be some questions you don't wish to answer. You can skip any questions if you don't want to answer. Your participation is completely voluntary. Your decision about participation will not make any influence on your benefits from DCFS or any government agencies now as well as in the future.

After the survey, Jiyoung will combine information from your survey with two kinds of information – first, the survey you recently filled out about the DCFS and second, the record in DCFS system about whether your family is contacted again. However, all information you provided us and in the system will remain **confidential**. Your name is taken off from all records and we link information only by ID. We will never link your name with any of information. Also, your answers will be combined with the answers of others in the study and reported in a summary form. However, if we are told that a child is now being abused and neglected, at risk of harm to self or others, we are required to report this to DCFS by law. The results from the study will be used for a doctoral dissertation as well as academic journals.

As a way of saying "Thank You!" for helping us with this study, we will provide a **$15.00 Wal-Mart gift card.**

For your information, **keep the consent form on the blue sheet. Send us the consent form in white sheet and the completed survey.**

if you have any questions about the study, please feel free to contact the investigators, Jiyoung Kang (phone: 217-721-0918, email: kang30@illinois.edu) or Tamara Fuller (phone: 217-333-5837, email: t-fuller@illinois.edu).

Your help with our study is really appreciated.

Very truly yours,

Jiyoung Kang, M.A.
Doctoral student
Children and Family Research Center
School of Social Work
University of Illinois at Urbana-Champaign

KEEP THIS ONE FOR YOUR INFORMATION

CAREGIVER INFORMED CONSENT FORM

You have been invited to a study about the Illinois Department of Children and Family Services (DCFS) and the effectiveness of services that you may have received from them. This study is being conducted by a doctoral student, Jiyoung Kang under the direction of Dr. Tamara Fuller at the School of Social Work at the University of Illinois at Urbana-Champaign. In this study, we are interested in learning about changes in you and your families' stress and support after meeting with child welfare workers (from DCFS and other agencies), and about how helpful they were in helping you to manage stress and stay away from re-contact by DCFS. The survey questions will ask about how you and your family handle stressful situations, support you have after meeting child welfare workers as well as difficulties you had before meeting child welfare workers.

Participation in this study is completely voluntary. There is little or no risk to respondents, although certain personal questions may be uncomfortable to answer. You may decide to skip questions you prefer not to answer. If you refuse to participate, this will not affect any services or subsidies you or your family receive from DCFS or any government agencies. The interview lasts about 30-40 minutes. You will be given **a $15 gift card** as a thank you for your time and valuable information.

After the survey, we will combine information from your telephone interview with two kinds of information – first, the survey you recently filled out about the DCFS and second, the record in DCFS system about whether your family is contacted again. However, all information you provided us and in the system will remain **confidential**. Your name is taken off from all records and we link information only by ID. We will never link your name with any of information. Also, your answers will be combined with the answers of others in the study and reported in a summary form. However, if we are told that a child is now being abused and neglected, at risk of harm to self or others, we are required to report this to DCFS by law. The results from the study will be used for a doctoral dissertation as well as academic journals.

If you have any questions about your participation, you may contact Jiyoung Kang (phone: 217-721-0918, email: kang30@illinois.edu) or Tamara Fuller (phone: 217-333-5837, email: t-fuller@illinois.edu) at the School of Social Work at University of Illinois at Urbana-Champaign. In addition, if you have any questions about participants' rights, you may contact the Institutional Review Board at the University of Illinois at Urbana-Champaign by calling 217-333-2670 or emailing irb@illinois.edu.

Please answer each of the questions below by circling YES or NO. Then print your name and sign at the bottom.

Participant Agreements:

I agree to participate in the interview that will include questions about stressful situations my family had before and after DCFS contact and how me and my family copes with them. (YES NO)

I understand that my participation in the study is completely voluntary and will not affect my services in any way. (YES NO)

I understand that I do not have to answer any questions that I don't wish to answer and that I may stop the interview at any time. (YES NO)

I understand that my identity and answers will be kept confidential. (YES NO)

I know who to call if I have additional questions or concerns about the study. (YES NO)

DATE: _____

NAME: _____ SIGNATURE:_____

SEND THIS ONE TO US!

CAREGIVER INFORMED CONSENT FORM

You have been invited to a study about the Illinois Department of Children and Family Services (DCFS) and the effectiveness of services that you may have received from them. This study is being conducted by a doctoral student, Jiyoung Kang under the direction of Dr. Tamara Fuller at the School of Social Work at the University of Illinois at Urbana-Champaign. In this study, we are interested in learning about changes in you and your families' stress and support after meeting with child welfare workers (from DCFS and other agencies), and about how helpful they were in helping you to manage stress and stay away from re-contact by DCFS. The survey questions will ask about how you and your family handle stressful situations, support you have after meeting child welfare workers as well as difficulties you had before meeting child welfare workers.

Participation in this study is completely voluntary. There is little or no risk to respondents, although certain personal questions may be uncomfortable to answer. You may decide to skip questions you prefer not to answer. If you refuse to participate, this will not affect any services or subsidies you or your family receive from DCFS or any government agencies. The interview lasts about 30-40 minutes. You will be given **a $15 gift card** as a thank you for your time and valuable information.

After the survey, we will combine information from your telephone interview with two kinds of information – first, the survey you recently filled out about the DCFS and second, the record in DCFS system about whether your family is contacted again. However, all information you provided us and in the system will remain **confidential**. Your name is taken off from all records and we link information only by ID. We will never link your name with any of information. Also, your answers will be combined with the answers of others in the study and reported in a summary form. However, if we are told that a child is now being abused and neglected, at risk of harm to self or others, we are required to report this to DCFS by law. The results from the study will be used for a doctoral dissertation as well as academic journals.

If you have any questions about your participation, you may contact Jiyoung Kang (phone: 217-721-0918, email: kang30@illinois.edu) or Tamara Fuller (phone: 217-333-5837, email: t-fuller@illinois.edu) at the School of Social Work at University of Illinois at Urbana-Champaign. In addition, if you have any questions about participants' rights, you may contact the Institutional Review Board at the University of Illinois at Urbana-Champaign by calling 217-333-2670 or emailing irb@illinois.edu.

Please answer each of the questions below by circling YES or NO. Then print your name and sign at the bottom.

Participant Agreements:

I agree to participate in the interview that will include questions about stressful situations my family had before and after DCFS contact and how me and my family copes with them. (YES NO)

I understand that my participation in the study is completely voluntary and will not affect my services in any way. (YES NO)

I understand that I do not have to answer any questions that I don't wish to answer and that I may stop the interview at any time. (YES NO)

I understand that my identity and answers will be kept confidential. (YES NO)

I know who to call if I have additional questions or concerns about the study. (YES NO)

DATE: _____

NAME: _____ SIGNATURE:_____

APPENDIX B

TELEPHONE SURVEY QUESTIONNAIRE

SECTION I

This telephone survey has six sections. The first and the last section are a little longer than the other four sections in the middle.

In the first section of this telephone survey, we are going to ask you about how you deal with stressful situations in general. There are many ways to deal with stressful situations, but we are interested in the type of things YOU do. Each item says something about a particular way of coping. I want to know how much or how often you've been doing what the item says. Don't answer on the basis of whether it seems to be working or not—just whether or not you're doing it. Try to answer each item separately in your mind from the others. Make your answers as true FOR YOU as you can.

Now, I will read you statements related to these activities. For each statement, please respond with four options-not at all, a little bit, a medium, or a lot.

When I deal with stressful situations,

1. I turn to work or other activities to take my mind off things.			
Not at all	A little bit	A medium amount	A lot
2. I concentrate my efforts on doing something about the situation I'm in.			
Not at all	A little bit	A medium amount	A lot
3. I say to myself "this isn't real."			
Not at all	A little bit	A medium amount	A lot
4. I use alcohol or other drugs to make myself feel better.			
Not at all	A little bit	A medium amount	A lot
5. I get emotional support from others.			
Not at all	A little bit	A medium amount	A lot
6. I give up trying to deal with it.			
Not at all	A little bit	A medium amount	A lot
7. I take action to try to make the situation better.			
Not at all	A little bit	A medium amount	A lot

8. I refuse to believe that it has happened.			
Not at all	A little bit	A medium amount	A lot
9. I say things to let my unpleasant feelings escape.			
Not at all	A little bit	A medium amount	A lot
10. I get help and advice from other people.			
Not at all	A little bit	A medium amount	A lot
11. I use alcohol or other drugs to help me get through it.			
Not at all	A little bit	A medium amount	A lot
12. I try to see it in a different light, to make it seem more positive.			
Not at all	A little bit	A medium amount	A lot
13. I criticize myself.			
Not at all	A little bit	A medium amount	A lot
14. I try to come up with a strategy about what to do.			
Not at all	A little bit	A medium amount	A lot
15. I get comfort and understanding from someone.			
Not at all	A little bit	A medium amount	A lot
16. I give up the attempt to cope.			
Not at all	A little bit	A medium amount	A lot
17. I look for something good in what is happening.			
Not at all	A little bit	A medium amount	A lot
18. I make jokes about it.			
Not at all	A little bit	A medium amount	A lot
19. I do something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping.			
Not at all	A little bit	A medium amount	A lot
20. I accept the reality of the fact that it has happened.			
Not at all	A little bit	A medium amount	A lot

21. I express my negative feelings.			
Not at all	A little bit	A medium amount	A lot
22. I try to find comfort in my religion or spiritual beliefs.			
Not at all	A little bit	A medium amount	A lot
23. I try to get advice or help from other people about what to do.			
Not at all	A little bit	A medium amount	A lot
24. I learn to live with it.			
Not at all	A little bit	A medium amount	A lot
25. I think hard about what steps to take.			
Not at all	A little bit	A medium amount	A lot
26. I blame myself for things that happened.			
Not at all	A little bit	A medium amount	A lot
27. I pray or meditate.			
Not at all	A little bit	A medium amount	A lot
28. I make fun of the situation.			
Not at all	A little bit	A medium amount	A lot

Section II

Thank you for answering those questions. Now we move on to the second section. In this second section, we are going to ask some questions about your feelings about your family. Please listen to each statement and decide how true or not true it is about your family. You can choose the answer that best fits your feelings. There is no right or wrong answers to these questions.

For each statement, please respond with four options – false, mostly false, mostly true, or true.

In Our Family….				
1. Trouble results from mistakes we make.	False	Mostly False	Mostly True	True
2. It is not wise to plan ahead and hope because things do not turn out anyway.	False	Mostly False	Mostly True	True
3. Our work and efforts are not appreciated no matter how hard we try and work.	False	Mostly False	Mostly True	True
4. In the long run, the bad things that happen to us are balanced by the good things that happen.	False	Mostly False	Mostly True	True

5. We have a sense of being strong even when we face big problems.	False	Mostly False	Mostly True	True
6. Many times I feel I can trust that even in difficult times things will work out.	False	Mostly False	Mostly True	True
7. While we don't always agree, we can count on each other to stand by us in times of need.	False	Mostly False	Mostly True	True
8. We do not feel we can survive if another problem hits us.	False	Mostly False	Mostly True	True
9. We believe that things will work out for the better if we work together as a family.	False	Mostly False	Mostly True	True
10. Life seems dull and meaningless.	False	Mostly False	Mostly True	True
11. We strive together and help each other no matter what.	False	Mostly False	Mostly True	True
12. When our family plans activities, we try new and exciting things.	False	Mostly False	Mostly True	True
13. We listen to each others' problems, hurts and fears.	False	Mostly False	Mostly True	True
14. We tend to do the same things over and over….it's boring.	False	Mostly False	Mostly True	True
15. We seem to encourage each other to try new things and experiences.	False	Mostly False	Mostly True	True
14. It is better to stay at home than go out and do things with others.	False	Mostly False	Mostly True	True
17. Being active and learning new things are encouraged.	False	Mostly False	Mostly True	True
18. We work together to solve problems.	False	Mostly False	Mostly True	True
19. Most of the unhappy things that happen are due to bad luck.	False	Mostly False	Mostly True	True
20. We realize our lives are controlled by accidents and luck.	False	Mostly False	Mostly True	True

Section III

Thank you for your answers to those questions. Now, we move on to the third section. In this section, we will ask you about your feelings and thoughts during the past two weeks. For each question, please choose one answer to indicate how often you felt or thought that way in the past two weeks. You have "five" options- never, almost never, sometimes, fairly often, or very often.

1. In the past two weeks, how often have you been upset because of something that happened unexpectedly?				
___Never	__ Almost never	___Sometimes	___Fairly often	___Very often

2. In the past two weeks, how often have you felt that you were unable to control the important things in your life?				
___Never	__ Almost never	___Sometimes	___Fairly often	___Very often
3. In the past two weeks, how often have you felt nervous and "stressed"?				
___Never	__ Almost never	___Sometimes	___Fairly often	___Very often
4. In the past two weeks, how often have you felt confident about your ability to handle your personal problems?				
___Never	__ Almost never	___Sometimes	___Fairly often	___Very often
5. In the past two weeks, how often have you felt that things were going your way?				
___Never	__ Almost never	___Sometimes	___Fairly often	___Very often
6. In the past two weeks, how often have you found that you could not cope with all the things that you had to do?				
___Never	__ Almost never	___Sometimes	___Fairly often	___Very often
7. In the past two weeks, how often have you been able to control irritations in your life?				
___Never	__ Almost never	___Sometimes	___Fairly often	___Very often
8. In the past two weeks, how often have you felt that you were on top of things?				
___Never	__ Almost never	___Sometimes	___Fairly often	___Very often
9. In the past two weeks, how often have you been angered because of things that were outside of your control?				
___Never	__ Almost never	___Sometimes	___Fairly often	___Very often
10. In the past two weeks, how often have you felt difficulties were piling up so high that you could not overcome them?				
___Never	__ Almost never	___Sometimes	___Fairly often	___Very often

Section IV

Thank you for your answers. Now, we move on to fourth section. In this section, we ask you about how much support or help you receive from your spouse or partner.

Do you have a spouse or a partner? Yes, No

IF YES, READ THE NEXT SENTENCE. IF NO, GO TO SECTION V.

Here is a list of things that your spouse/partner can do for you or give you.
Please listen to each statement carefully and pick the choice closest to your situation. You will have five options- never, almost never, sometimes, fairly often, or very often.

1. My spouse/partner cares what happens to me				
___Never	___Almost never	___Sometimes	___Fairly often	___Very often
2. I get love and affection from my spouse/partner.				
___Never	___Almost never	___Sometimes	___Fairly often	___Very often
3. I get chances to talk to my spouse/partner about problems at work or with my housework.				
___Never	___Almost never	___Sometimes	___Fairly often	___Very often
4.I get chances to talk to my spouse/partner about my personal and family problems				
___Never	___Almost never	___Sometimes	___Fairly often	___Very often
5. I get chances to talk to my spouse/partner about money matters.				
___Never	___Almost never	___Sometimes	___Fairly often	___Very often
6. I and my spouse/partner go out and do things together.				
___Never	___Almost never	___Sometimes	___Fairly often	___Very often
7. I get useful advice about important things in life from my spouse/partner.				
___Never	___Almost never	___Sometimes	___Fairly often	___Very often
8. My spouse/partner helps me when I'm sick in bed.				
___Never	___Almost never	___Sometimes	___Fairly often	___Very often

Section V

Thank you. Now we move on to fifth section. In this section, we ask you about how often you encounter some negative interactions with people around you. Listen carefully and choose one answer. You have four options-never, once in a while, fairly often, or very often.

1. In the past two weeks, how often have you been feeling that others made too many demands on you?			
Never	Once in a while	Fairly often	Very often
2. In the past two weeks, how often have you been feeling that others were critical of you and things you did?			
Never	Once in a while	Fairly often	Very often

3. In the past two weeks, how often have you been feeling that those around you tried to pry into your personal affairs?			
Never	Once in a while	Fairly often	Very often
4. In the past two weeks, how often have you been feeling that others took advantage of you?			
Never	Once in a while	Fairly often	Very often
5. In the past two weeks, how often have you been feeling that others did things that were thoughtless and inconsiderate?			
Never	Once in a while	Fairly often	Very often
6. In the past two weeks, how often have you been feeling that others acted angry and upset with you?			
Never	Once in a while	Fairly often	Very often
7. In the past two weeks, how often have you been feeling that others questioned or doubted your decision?			
Never	Once in a while	Fairly often	Very often

Section VI

Thank you. We have only one more section to go! In this section, we are going to ask you about some stressful situations that you might have been experiencing around the time you were reported to child protective services (CPS). For each question, you can answer either 'Yes' or 'No' depending on whether any of these stressful situations were happening around the time you were reported to CPS.

Before we start the questions, can you remember the time when you were reported to CPS. What month and year was it? (Month: Year:)

(FOR CASES THAT RESPONDENTS CAN'T REMEMBER)
WAS IT THIS YEAR? WAS IT IN JANUARY?...

1. Housing
First, I want you to think about your housing situation and neighborhood when you were reported to CPS. At that time,

1. Did you change residence or move?	Yes	No
2. Did you live in overcrowded housing?	Yes	No
3. Did you try to get your landlord to make repairs?	Yes	No
4. Did you live in housing in need of repairs?	Yes	No
5. Did you live in a neighborhood with high crime?	Yes	No
6. Did you live in a violent neighborhood?	Yes	No
7. Did you live in a drug-ridden neighborhood?	Yes	No

8. Did you live in an excessively noisy neighborhood?	Yes	No

2. Well-being-self, health

Now I want you to think about the health and well-being of you and people around you when you were reported to CPS. At that time,

9. Did someone approach or speak to you disrespectfully discriminating against you?	Yes	No
10. Did you have a lot of housework?	Yes	No
11. Did you have enough time for yourself?	Yes	No
12. Did you have any family member ill or injured?	Yes	No
13. Did you have any friend ill or injured?	Yes	No
14. Were you ill and had a health condition?	Yes	No
15. Did you have chronic pain and/or disability?	Yes	No
16. Were you overweight?	Yes	No
17. Were you/your spouse pregnant?	Yes	No
18. Did you/your spouse give birth to a child?	Yes	No
19. Did you/your spouse have an abortion?	Yes	No
20. Did you/your spouse have a miscarriage, stillbirth, or unable to conceive?	Yes	No
21. Did you have a surgery?	Yes	No
22. Did you prepare for a medical test?	Yes	No
23. Were you the victim of a crime (e.g., mugging, assault, shooting, stabbing, rape) ?	Yes	No
24. Did you experience death of someone close to you? IF 'YES', GO TO 25. IF 'NO', GO TO III. PARENTING.	Yes	No
25. Did your parent pass away?	Yes	No
26. Did your family member (not parents) pass away?	Yes	No
27. Did your child pass away?	Yes	No
28. Did your partner pass away?	Yes	No
29. Did your friend or someone in your community/social network pass away?	Yes	No

3. Parenting

Now I want you to think about your parenting situation around the time you were involved with CPS. At that time,

30. Were you a mother/father and also working (and/or going to school)?	Yes	No
31. Did you try to find a dependable babysitter?	Yes	No
32. Were you the only parent ?	Yes	No
33. Did you have to tell your child something over and over?	Yes	No
34. Did you have **enough** time to spend with your child or children?	Yes	No
35. Did you get children ready in the morning?	Yes	No
36. Were you **unsure** if the way you disciplined your child was right?	Yes	No

4. Friend

Now I want you to think about your friends and friendship around the time you were involved with CPS. At that time,

37. Did a friend of yours betray you?	Yes	No

38. Did a friendship break up?	Yes	No
39. Were you turned down for help from someone you've helped before?	Yes	No
40. Did you depend on someone who didn't come through?	Yes	No
41. Did your friend have emotional or financial problems?	Yes	No
42. Did you have argument(s) with friend(s) or acquaintance(s)?	Yes	No
43. Did your friends drink too much or were they involved with drugs?	Yes	No

5. Family member

Now I want you to think about your family members around the time you were involved with CPS. At that time,

44. Were any of your family members being abused?	Yes	No
45. Were you having arguments with any of your family members?	Yes	No
46. Did any of your family members have personal/emotional/financial problems?	Yes	No
47. Were any of your family members arrested, in jail, or in trouble with the law?	Yes	No
48. Did any of your family members drink too much?	Yes	No
49. Were you having conflicts with any of your family members or in-laws?	Yes	No

6. Partner/spouse

Now I want you to think about your romantic partner or spouse around the time you were involved with CPS. At that time,

50. Were you newly married or in a new relationship?	Yes	No
51. If you were married, did you have a marital separation or break-up?	Yes	No
52. If you were not married, did you have a break-up with your romantic partner?	Yes	No
53. Did you get a divorce?	Yes	No
54. Did your partner lose his/her job?	Yes	No
55. Was your partner arrested, in jail, or in trouble with the law?	Yes	No
56. Were you torn between two romantic partners?	Yes	No
57. Did your partner lie to you?	Yes	No
58. Did your partner get along with your friends?	Yes	No
59. Did you have a satisfying sexual relationship with your partner?	Yes	No
60. Did you have argument(s) with your partner?	Yes	No
61. Were you involved with a partner who didn't contribute financially?	Yes	No
62. Did your partner spend money in ways you thought unwise?	Yes	No
63. Were you seeking a romantic or sexual relationship?	Yes	No
64. Did your partner demand or ask to borrow money from you?	Yes	No
65. Was your partner jealous or possessive?	Yes	No
66. Was your partner involved with another person?	Yes	No

7. Job/school/financial

Now, I would like you to think about your employment, school, and finances around the time you were involved with CPS. At that time,

67. Did you lose your job?	Yes	No
68. Had you been unemployed?	Yes	No

IF 'YES', GO TO, 70. IF 'NO', GO TO 69.		
69. Did your co-workers do their share of the work?	Yes	No
70. Were you in school (but not working)?	Yes	No
IF 'YES', GO TO 71. IF 'NO', GO TO 72.		
71. Were you preparing for a school test?	Yes	No
72. Were you trying to find a job when you were reported to CPS?	Yes	No
73. Were you in debt beyond means of repayment?	Yes	No
74. Did you experience a decrease in income, loss of benefits, or sanction by welfare?	Yes	No
75. Were you trying to make ends meet or running out of money?	Yes	No
76. Were bill collectors harassing you?	Yes	No
77. Were you unable to afford your own place?	Yes	No
78. Were you trying to get credit?	Yes	No
79. Were you unable to afford things your kid(s) wanted?	Yes	No
80. Were you behind on bills?	Yes	No
81. Were you **unable** to afford to replace worn out furniture?	Yes	No
82. Were you **unable** to afford basic necessities for yourself or your household?	Yes	No
83. Were you **unable** to afford health care costs?	Yes	No
84. Were you **unable** to afford dinner out or entertainment?	Yes	No
85. Were you unsure if you could pay rent, utilities and buy food?	Yes	No
86. Were you unable to buy a home even though you wanted?	Yes	No
87. Were you applying for social service aid or welfare?	Yes	No
88. Were you unable to afford a car even though you wanted?	Yes	No
89. Did you have problems with buses/public transportation or couldn't afford bus fare/pass?	Yes	No
90. Were you having car troubles?	Yes	No
91. Were you on TANF (welfare)?	Yes	No

That is the end of the survey! We really appreciate your participation. Do you have any questions?

To send you a $15 gift card, would you confirm your address? (THE INTERVIEWER CHECKS THE ADDRESS GIVEN TO THEM) You will receive the gift card in 2 weeks. Would you like to know who you call when you have questions?

IF YES, LET THEM KNOW: Jiyoung Kang at ***-***-****.
IF NO, Thank you again. Take care.