

UNDERSTANDING INDIVIDUAL LEVEL MOTIVATIONS FOR REPEAT
SERVICE USE IN A FAMILY SUPPORT PROGRAM

By

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ABSTRACT OF THE DISSERTATION

Understanding Individual Level Motivation for Repeat Service Use

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This study tested a conceptual model derived from health behavior theories to explain repeat service use in a primary child maltreatment prevention and family support program, the Family Success Centers (FSCs). FSCs are universal neighborhood-based centers that use a family support approach to engage families in a range of flexible services intended to promote protective factors and reduce risk for child maltreatment. Five Centers were selected in different parts of New Jersey from which 115 parents were interviewed shortly after coming to an FSC for the first time. Administrative data provided information on the number of times families returned over a three-month period following the interview. Extant research suggested that individual level motivations derive from perceptions related to psychologically, socially, and intervention related factors. This study used a three-stage process to test a model whereby intentions to repeat services were posited to mediate the relationship between repeat service use and perception of need, expectations of benefit, self-efficacy, integrated motivation, injunctive and descriptive social norms, and family support practices. Intention to return was predicted by older age, unemployment, integrated motivation, and family support

practices. Contrary to the tenets of the Theory of Planned Behavior, intentions to return did not mediate the relationships between individual characteristics and repeat service use. Repeat service use was predicted by non-Hispanic White race/ethnicity, single/never married status, having had some college education, identification of complex service needs (versus concrete only), higher level of integrated motivation, and endorsement of a lower level of descriptive social norms (i.e. social network experience with similar services). Results suggest a need to address engagement most particularly for those that enter the program for the express purpose of meeting their concrete needs. Further, engaging first time participants to bring a friend or relative might improve repeat service use for those with more service involved social networks. Additional research is needed to understand the implications of site-level differences, better elucidate the role of integrated motivation in social service research, examine reasons why social networks that are involved in social services might attenuate repeat participation, and explore the utility of the intentions construct in research.

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CHAPTER 1

INTRODUCTION

Background

In 2011, an estimated 3.4 million allegations of abuse or neglect, involving roughly 6.3 million children or 46.1 of every 1,000 children were alleged to have been abused or neglected in the United States (U.S. Department of Health and Human Services, 2012). A multitude of risk factors have been implicated in the etiology of abuse and neglect, amongst them poverty, stress, social isolation, and lack of parenting skills and knowledge (Goldman, Salus, Wolcott, & Kennedy, 2003). Arguably the primary public strategy for addressing child maltreatment is child protection, whereby alleged cases of maltreatment are referred to state government agencies that investigate, determine whether abuse and neglect reaches statutory levels, and provide in-home or out-of-home (i.e. foster care) services.

Numerous community-based services have been developed, however, to prevent abuse and neglect from ever occurring. Understanding why families become engaged with prevention services is essential to improving engagement in these services. This study will examine individual level motivations for repeat service use at a primary child abuse prevention service. This chapter will discuss essential differences between various types of prevention services -- particularly in regards to how families engage with these services -- in order to inform the application of theories to the specific service model discussed in the next chapter.

Prevention Typology

Child maltreatment prevention services provided by child protective service agencies are termed “tertiary” and are intended to prevent re-occurrence of abuse. Prevention services provided before maltreatment has occurred are termed either “primary” or “secondary”, depending on whether they have been developed for every parent or parents with higher risk characteristics respectively (Thompson, 1994; U.S. Department of Health and Human Services, n.d.). An alternative classification system uses the terms “universal, selective, and indicated” in a similar manner (Rae-Grant, 1994). For the purposes of this dissertation, services provided before abuse and neglect have been determined by child protective services will be considered prevention and services provided after determination will be considered protection, in keeping with Willis and colleagues’ (1992) definition of prevention as “intervention that occurs before the development of a disorder to either prevent the disorder itself or prevent some manifestation of the disorder” (p.5).

A number of primary and secondary child abuse and neglect prevention strategies have been developed since the first national child abuse prevention law was passed, the Child Abuse and Neglect Prevention and Treatment Act in 1974 (U.S. Department of Health and Human Services, 2011), in an attempt to stem the tide of families whose situations have become so dire as to require intervention by child protective services. Many of these strategies, such as home visiting programs, parenting groups, and neighborhood resource centers are designed to address multiple risk factors, including those noted above.

Implications of the Prevention Typology for Service Engagement

Programs targeted towards higher risk populations may tend to be interventions specifically attuned to particular needs and may generate greater participant and clinician motivation (Rose, 1985). However, these programs often fail to reach many people with moderate risk characteristics that could benefit from them and they often do not deal with the root of the problem – that of exposure of a population to risk factors – but rather addresses those individuals that are susceptible to it (Rose, 1985). In addition, these interventions do not normalize the new behavior that they are promoting, which may be novel under certain social contexts and therefore more difficult to adopt. The universal strategy is one that seeks to ‘shift the curve,’ by reducing risk and the incidence of malfunction or disease in the entire population through normalized behaviors. This too has its limitations, particularly in regard to motivation, as both participants and providers may have low motivation stemming from unclear perception of need (Rose, 1985).

Concurrently, prevention programs tend to differ in regards to how a parent encounters a program and the degree of autonomous choice they have in various aspects of participation. Prevention services are assumed to be voluntary, in contrast to services provided in the protection service arena in which families may feel as though their participation is constrained based on the threat of loss of parenting rights (Littell & Tajima 2000; Wertheimer, 1993). Child protective services diversionary programs, such as differential response (see Winokur, Drury, Batchelder, & Mackert, 2012), may be less than truly voluntary, as families might feel pressured to participate in order to avoid further problems with the system (see Littell & Tajima, 2000). These services should also be considered part of the indicated/tertiary system.

Families encounter voluntary prevention services through outreach, referral or request. Outreach and referral both involve an identification process where a professional initiates services, while the parent initiates services that are requested. While many of these services could be accessed through all three means, there is often a predominant access pathway associated with a particular prevention approach. Specifically, many of these services are provided to at-risk families through screening, outreach, and home visits (e.g. Healthy Families America) (Diaz, Oshana, & Harding, 2004). Families involved in services that outreach and come to the home might refuse services outright or passively refuse through avoidance (McCurdy, et al., 2006). These types of services might succeed in engaging families that have minimal interest in the service, but don't take the steps to refuse or avoid the service.

Other prevention services are embedded or closely affiliated with places that families regularly encounter, such as parenting groups provided at child care centers or resource and support centers located in or affiliated with schools. Some services may be universal and accessed by request, but many of these services are provided based on identification of children and families at-risk. It might be assumed that ease of access, establishment of relationships, and/or child-specific focus may facilitate participation in these environments. However, research suggests that these characteristics should not be assumed and providers need to take steps to facilitate access and receptivity to these services, which are often targeted towards very stressed populations (Alameda-Lawson, Lawson, & Lawson, 2010; Quinn, Hall, Smith, & Rabiner, 2010).

Lastly, some prevention services must often be sought out by nature, including neighborhood resource and support centers that are unaffiliated with educational or other

normalized institutions (California Family Resource Center Learning Circle, 2000).

Neighborhood resource and support centers providing universal services -- rather than targeted services to groups at particular risk -- place a higher responsibility on families to decide to return and determine what would benefit them than the other types of services discussed. It is also perhaps less likely that external pressure will be a factor with these families. These differences in the way that families encounter a service may be important in understanding how families come to participate in a prevention service.

Challenges with Engagement in Prevention Services

Participation in programs is a logical prerequisite of obtaining a benefit.

Unfortunately, many families who need assistance do not seek services (Alemeda-Lawson, Lawson, & Lawson, 2010; Broadhurst, 2003; Kemp, Marcenko, Hoagwood, & Vesneski, 2009). Of those that encounter a service, many do not remain in services long enough to receive the intended benefit, despite high needs characteristics (Gomby, Culroos, & Behrman, 1999; Gross, Julion, & Fogg; 2001; McCurdy & Daro, 2001).

Despite differences in means of service access described previously, problems with service engagement are experienced across models. For example, reporting data from 278 Healthy Families sites -- a home visiting program for at-risk parents of newborns -- in 2003 revealed that just 66% of parents participated for six months or longer, when the desired length of service was three years (Diaz, Oshana, & Harding, 2004). Studies of Safe Care -- a 6-month home visitation program for parents of children aged five or younger -- have varied in completion rates. One study with random assignment to Safe Care versus services as usual, found that 43% did not complete the program (Dameshek, Doughty, Ware, & Silovsky, 2011). Also, a study of PACE, which

is an eight-week parenting group provided through preschools found that just 33% attended seven to eight sessions (Dumas, Nissley-Tsiopinis, & Moreland, 2007).

According to Daro and Donnelly (2002), the majority of families in prevention programs “leave before reaching their service goals or achieving the service levels articulated in the program’s model” (p. 737).

While prevention services often struggle to engage participants, a recent study suggests that service context is important. Bloomquist and colleagues (2012) examined participation for 246 families that were recruited to an intervention (Early Risers) after their children were identified in an elementary school classroom as exhibiting disruptive behaviors. Prior to recruitment, families were randomly assigned to either receive services in their home or in a resource center, although both groups received some exposure to the other condition. Participation (i.e. number of minutes and number of contact independently) was significantly greater for parents assigned to the center-based version, which the researchers theorized provided more opportunities to participate in a broader array of other services than the in-home intervention. While these service minutes weren’t counted as participation in the study condition, they may have increased the parents’ attachment to the service. Also, parents may have found the center-based model’s social support networks and other group engagement processes beneficial (Bloomquist, August, Lee, Piehler, & Jensen, 2012).

Promoting retention in programs is considered a critical concern for researchers and service providers (Bloomquist, August, Lee, Piehler, & Jensen, 2012; Girvin, DePanfilis, & Daining, 2007). However, since prevention programs vary in their service array and approach, the generalizability of these studies must be carefully assessed. The

majority of extant research on prevention service participation has been conducted with discrete manualized services with a prescribed length of service or resource centers with targeted populations and commensurate services, such as those noted above. There is a paucity of research on participation in neighborhood-based resource centers, which provide a diverse array of services, have an open-ended expectation regarding overall service duration, and generally must be sought out by the parent. This study will utilize theories and models that have been developed to explain help seeking behavior and general behavior decisions to contribute to knowledge regarding service utilization in a universal, neighborhood-based resource and support center for families that have accessed a center for the first time.

Significance of the Study and Relevance to Social Work

Although abundant research has been done on service use engagement in other fields, such as substance abuse and mental health treatment (e.g. Brown, Casey, Bishop, Prytys, Whittinger, & Weinsman, 2010; Mojtabai, 2008; Srebnik, Cauce, & Baydar, 1996), there has been little research done in the field of child abuse prevention (McCurdy & Daro, 2001). Research that has been conducted has largely focused on families that accept services, rather than families that seek services (e.g. McCurdy et al., 2005), which might be an important distinction. Additionally, the majority of this research has focused exclusively on the cognitive and social factors (Cauce, Domenech-Rodriguez, Paradise et al., 2002; Singer, 2009), neglecting the role of the service environment. Provider characteristics, for example, may also be important and likely interact with characteristics of the parents to develop intentions (McCurdy & Daro, 2001). Also, the literature on family services has largely neglected whether parents are accessing services because they

intrinsically desire them, as opposed to feeling pressured, which has also seldom been conducted in studies of this nature in other service fields (Hagger, Chatzirantis, & Biddle, 2002).

Further, in reviewing the research on repeat service use in family support programs, some studies have relied upon demographic characteristic and clinical data concerning service targets (e.g. Daro, McCurdy, Falconnier, & Stojanovic, 2003; Speilberger & Lyons, 2009), some have included scales or interviews that gauge the perceptions of parents regarding certain aspects that might relate to retention (e.g. Girvin, DePanfilis, & Daining, 2007; Gross, Julion, & Fogg, 2001; Nicholson, Brenner, & Fox, 1999), and some studies examine the possible mediating role of intentions (e.g. Christian & Abrams, 2003; Dumas, Nissley-Tsiopinis, & Moreland, 2007; McCurdy et al., 2006). However, there are few studies of the latter (Dumas, Nissley-Tsiopinis, & Moreland, 2007), despite the popularity of the intentional construct in behavior research overall. Therefore, this study makes a unique contribution to the literature by utilizing scales to examine repeat service use and the mediating role of intentions.

Prior research has identified malleability in individual level motivating characteristics for service use, which suggests opportunities for intervention (Crosby & Noar, 2010). According to Armistead and colleagues (2004), a number of strategies designed to increase retention in family support programs are effective, including incentivizing and reducing barriers to attendance. Understanding family characteristics and processes in child maltreatment prevention and family support services could aid in the designing of more effective recruitment and engagement strategies and other program development and improvement efforts (McCurdy & Daro, 2001; Painter, Borba, Hynes,

Mays, & Glanz, 2008; Randolph, Fincham, & Radey, 2009). Models that examine the development of intentions to engage in services hold promise for elucidating these key factors and processes (McCurdy & Daro, 2001; Randolph, Fincham, & Radey, 2009). Additionally, this is the first study conducted of New Jersey's Family Success Centers, of which there are currently 52 and at least one in every county.

In summary, this study makes two primary contributions to the field by: 1) exploring parents' motivations for repeated service usage in a primary child maltreatment prevention/family support program and 2) testing a theoretically-based mediation model. While similar explorations of service usage have been examined in other service contexts, they have not been examined in a primary child abuse and neglect prevention and family support program.

CHAPTER 2

LITERATURE REVIEW

In New Jersey, neighborhood resource and support centers are called Family Success Centers (FSC). FSCs were established in 2006 as part of New Jersey's child welfare reform efforts, to provide a range of primary prevention activities. This chapter will discuss the FSC as a model of practice with families, followed by a discussion of health theories of behavior that are most relevant to understanding the process of engagement with families. From these, the major theoretical constructs that have been used in studies of participant engagement have been identified and will be discussed along with relevant empirical studies testing the predictive power of those constructs with families. Lastly, a model will be presented that emerged from the application of the theories and constructs in this particular service context.

Family Success Centers

FSCs emerged from child welfare reform efforts in New Jersey to enhance the array of child maltreatment prevention services available to families. They are a type of family resource and support programs (which will be referred to as "family support programs"). Rooted in the settlement-house movement of the early 1900s, family support programs developed in the 1970s as interest was renewed in community-based, mutual self-help and parent education approaches (California Family Resource Learning Circle, 2000; Lightburn & Kemp, 1994). During the 1990s, federal support for family support programs was promoted by the Family Preservation and Support Services Program Act (Title IV-B of the Social Security Act, under the Omnibus Reconciliation Act of 1993) (P.L. 103-66) (Layzer, Goodson, Bernstein, & Price, 2001). This legislation supported

two types of family services. The first is family preservation services, which is a targeted approach to help families involved with public child welfare systems and is intended to prevent removal or promote reunification. The second type is family support services, which are services to prevent public child welfare system involvement. The services facilitated through this legislation serve families at two ends of the spectrum.

Under the legislation, family support services are “community-based services to promote the well-being of children and families, designed to increase the strength and stability of families...to increase parents’ confidence and competence in their parenting abilities, to afford children a stable and supportive family environment, and otherwise enhance child development” (Layzer, Goodson, Bernstein, & Price, 2001, p. A2-1). Congruent with this broad conceptualization, much of the family support literature endorses a set of practice principles: strength-based practice, partnering/power-sharing with families, voluntary participation, family-centered services, family empowerment, universal access to services, universal types of services (i.e. services that any family may need), and a prevention, as opposed to treatment, orientation (Comer & Fraser, 1998; Everett, Homstead, & Drisko, 2007; Layzer, Goodson, Bernstein, & Price, 2001; McCurdy & Daro, 2001). In addition, family support programs have a dual focus: to support individual families and address issues placing families at risk at the community-level (California Family Resource Learning Circle, 2000; Putti & Brady, 2011).

Apart from these shared principles, however, there is no single model approach that typifies family support services. Family support may be provided to mandated, targeted, or universal populations: housed in freestanding or multi-service non-profit organizations: located in therapeutic environments, parents’ homes, or schools and child

care centers: and might include activities such as parent training, social support, or concrete assistance (Layzer, Goodson, Bernstein, & Price, 2001). Such differences would likewise produce variation in engagement strategies and parent motivation for participation. Further, they provide considerable challenge for studies of effectiveness, which are sparse and not generalizable to the full range of family support approaches (Schorr, 1997; Waddell, Shannon, & Durr, 2001).

In New Jersey, there are 52 Family Success Centers, at least one for each of New Jersey's 21 counties, supported by the state Department of Children and Families. They are provided around \$240,000 per year to provide their core services to any individual or family that contacts them, and are expected to serve a minimum of 250 individuals and families per year. (If multiple individuals participate from a nuclear family, they are counted once.) The centers may be either freestanding or part of a multi-service non-profit center. Regardless, the intent is that they be in a non-stigmatizing environment. FSCs serve parents and non-parents, have no eligibility requirements, and are open-ended in length of service (Chin, 2008; Department of Children and Families, 2011).

There are three facets to the FSCs: 1) philosophy/approach to engagement, 2) services, and 3) activities utilized to provide the services. FSC are expected to engage participants based on the principles of family support promoted by Family Support America and the New Jersey Task Force on Child Abuse and Neglect, as outlined in their joint publication *Standards for Prevention Programs: Building Success through Family Support* (Chin, 2008; New Jersey Task Force on Child Abuse and Neglect, 2014). Notably, the service approach at an FSC is expected to be voluntary, strength-based, self-determined, and flexible to address whatever reasons brought a person to the center.

In regards to services, they are considered one-stop shops, providing access to a range of resources and supports that reduce risk and promote protective factors that are related to potential child abuse and neglect, including information and referral, life skills training, parent education, parent-child activities, and advocacy (Department of Children and Families, 2011). In particular, these services are primarily intended to promote the protective factors endorsed by Center for the Study of Social Policy and the Administration for Children and Families: 1) concrete supports in times of need, 2) social connections, 3) parental resilience, 4) parental knowledge of parenting and child/youth development, 5) nurturing attachment and 6) social and emotional competence of children (Department of Children and Families, 2011).

Theory and evidence from the field of resilience suggest that protective factors such as the foregoing help individuals to adapt to stressful circumstances, and in so doing, buffer the effects of adversity (Cicchetti & Garmezy, 1993; Luthar, Cicchetti, & Becker, 2000). Specifically, social connections have been linked to reduced risk of neglect and emotional abuse, (Beeman, 1997; Zolotor & Runyan, 2006). Parental resiliency has multiple components (Walsh et al., 2014) and includes flexibility, use of social support, high expectations, self-efficacy, and self-esteem (Earvolino-Ramiz, 2009). Social and emotional competence of children contributes to reduced risk through improved parent-child interactions (Ammerman, 1991; Shonkoff & Phillips, 2000) and also promotes child resiliency (Werner & Smith, 1988). Additionally, poverty is strongly related to child maltreatment (e.g. Drake & Pandey, 1996; Sedlak et al., 2010) and there is some evidence that a small increase in income – through child support payments – could reduce the associated risk (Cancian, Slack, & Yang, 2010). While more research is

needed on the outcomes of interventions that promote protective factors, the approach is strongly endorsed by the Administration for Children and Families (U.S. Department of Health & Human Services, 2014).

The activities that FSCs use to provide services include one-on-one interactions in the center, home visits, advocacy and brokerage, and group activities. The type of service a person is requesting may relate to the type of activity that is provided. Specifically in regards to concrete supports, assistance is provided in navigating what Dupper & Poertner (1997) described as a “disempowering, fragmenting, and confusing” service system, as there is no funding for direct financial support. It seems likely that this is primarily done in a one-on-one interaction. Conversely, social connections (a.k.a. mutual support) are likely facilitated in group activities, as parents are brought together to reduce social isolation. Also, some activities are provided with the assistance of volunteers, who are actively sought and developed so that they can provide assistance in meeting the center’s core service goals, in keeping with the Settlement House philosophy of mutual aid (see Koerin, 2003). In addition, the FSCs include participants in program planning through advisory boards (Chin, 2008; New Jersey Task Force on Child Abuse and Neglect, 2014).

Despite common practice principles and services, a web-based survey¹ - responded to by 39 of the 52 FSC directors - revealed considerable variation amongst the family success centers (Ocasio, 2013). The survey was a separate, but related study, assessing aspects of implementation (ex. needs of families, percent of overall staff time spent on various activities, enrollment process, and supplemental services) from the

¹ Unpublished administrative report, available from author upon request.

perspectives of the directors. The majority of the FSCs were embedded within larger non-profit organizations (89%), as opposed to independent, freestanding centers. Some appeared to have a formal intake and assessment process, while others had minimal documentation of participants and a relaxed, friendly-greeter style of engagement. The centers varied in the proportion of staff time spent individually assisting families with emergent concrete needs, as opposed to other types of activities (e.g. parenting groups, nutrition workshops, etc.), such that some of the FSCs predominantly focused on individual, emergent concrete needs. Further, some felt the need to provide case management and clinical services, while others saw this as contrary to the FSC approach. Further, New Jersey's model is in the minority, in comparison to those included in the systematic review and meta-analysis of 427 family support programs, as only 13% of programs in that review accepted children of any age, 12% were truly universally accessible and only 6% provided services for as long as families requested them (Layzer, Goodson, Bernstein, & Price, 2001).

The success of family support programs in preventing child abuse and neglect depends, at least in part, on their effectiveness at engaging families that walk in their doors. According to a DCF program manager, there is no standardized process for enrolling families in the program and it is a flexible service model (Antonio Lopez, personal communication, July, 14, 2011). Some families may come for services that can be addressed immediately, such as securing a voucher for the bus or a food pantry, whereas other families will have come to the FSC for a service that necessitates longer-term involvement. These differences are likely to be related to the extent of repeat service use, such that families that received an immediately resolution would be less likely to

return. However, regardless of the reason that initially brought them to the center, it is the goal of the centers to engage each participant in repeat attendance in such a manner that they consider themselves members of a community center in which they can both give and receive support that will enhance their lives and contribute to the community. There is evidence from related activities being conducted with aging populations that this collective action can improve “feelings of agency and connectedness, thereby potentially contributing to enhanced physical and psychological well-being” (Scharlach, Davitt, Lehning, Greenfield, & Graham, 2014), suggesting that longer-term involvement in the FSCs may indeed have positive benefits. While providing assistance with accessing concrete services is of utmost importance, engaging families in activities that promote long-term strengths and capacities is of particular interest to the field (Horton, 2011; Pollard, Hawkins, & Arthur, 1999). The purpose of this study is to elucidate factors that motivate parents to continue to use services in this context. The next section of this chapter will discuss theories of planned and health behavior that are applicable.

Theory Review

A number of theories have been developed pertaining to help-seeking behavior and general behavior enactment under various context, such as physical health, mental health, HIV/AIDS, child protection, and child maltreatment prevention services. A conceptual model guiding this study draws upon the unified theory of behavior (Jaccard, Litardo, & Wan, 1999), conceptual model of parental involvement in family support (McCurdy & Daro, 2001), and the integrated model for engaging parents in prevention (Randolph, Fincham, & Radeey, 2009). While these models each draw upon multiple theories, all of them incorporate a key concept from the theory of planned behavior, the

intentionality construct, (Ajzen, 1985), whereby “self-instructions to perform particular behaviors or to obtain certain outcomes” are the proximal determinant of the behaviors or outcomes (Webb & Sheeran, 2006, p. 249). In addition, the conceptual model for this study will also include elements of an additional theory, self-determination theory (SDT). Including concepts from SDT allows the examination of the degree of autonomy exercised in decisions to participate in family support programs, which would seem an important aspect of motivation to include in model for family support. This section will discuss these models and theories, prior to presenting the model that informs this study.

Theory of Reasoned Action/Theory of Planned Behavior

The theory of planned behavior, and its antecedent, the theory of reasoned action, apply to behavior in general. The theory of reasoned action (TRA; Ajzen & Fishbein, 1975) is a socio-cognitive theory that assumes that people are rational decision-makers that form their intentions to perform a behavior after weighing all of the motivating factors (Ajzen, 1985) (Figure 1).

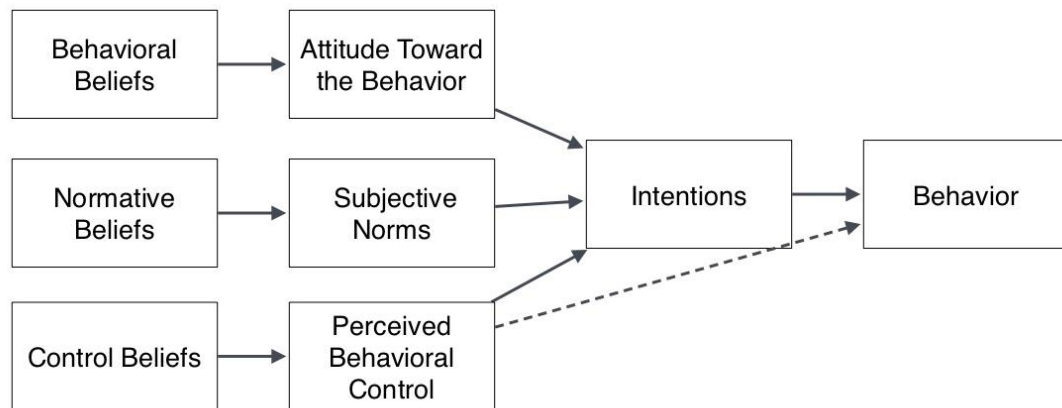


Figure 1. Theory of planned behavior. Adapted from “The Theory of Planned Behavior,” by I. Ajzen, 1991, *Organization Behavior and Human Decision Processes*, 50, 179-211. Copyright 2006 by Icek Ajzen.

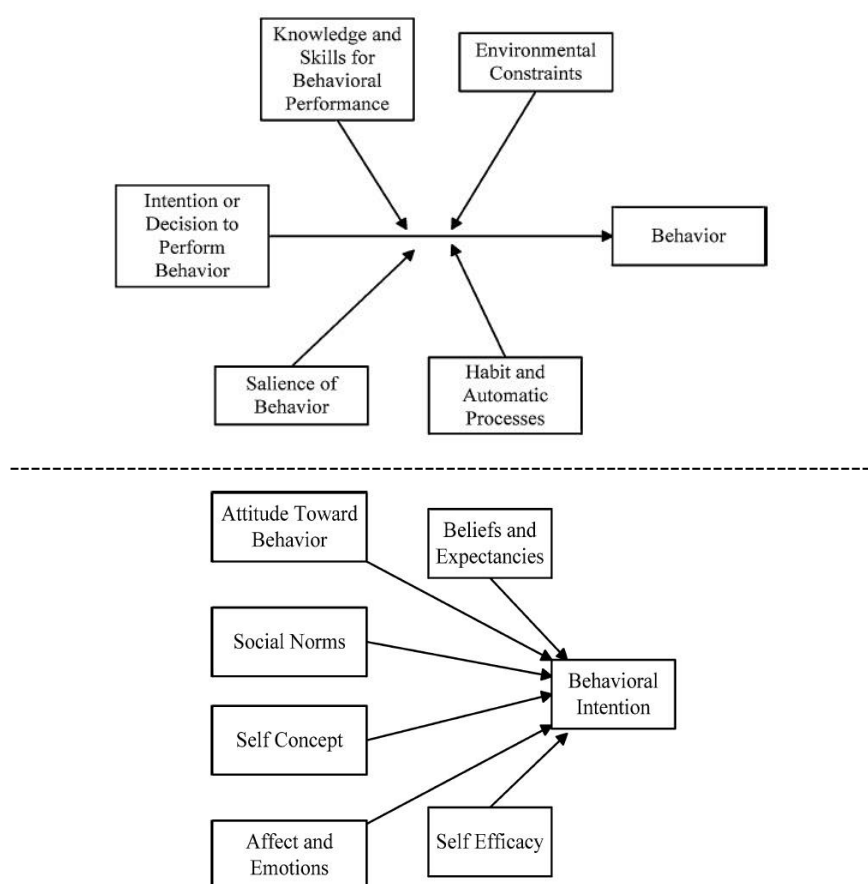
Two latent constructs, attitude toward the behavior and subjective norms, are thought to influence behavior by strengthening intentions to perform a behavior in the future. Attitudes are formed from an evaluation of the positive and negative consequences of performing the behavior based on their beliefs about the behavior and expectations regarding the desirability of the outcome of the behavior (Singer, 2009). Subjective norms are formed from the perception of social pressure to engage in a behavior, which might come from social network norms or other social perceptions that push or pull someone in regards to a behavior. In a subsequent revision of the theory, however, Ajzen added a third latent construct, perceived behavioral control, and renamed the theory the Theory Of Planned Behavior (Ajzen, 1985). Perceived behavioral control refers to self-efficacy, or one's belief in the ability to accomplish a particular task or achieve a goal, as a proxy for the actual ability to control the outcome (Ajzen, 1991, 2002). This addition improved the explanatory power of the theory in research, particularly when the behavior was still performed under conditions of weak intentions (Rimer & Glanz, 2005).

Unified Theory of Behavior

In 2001, the National Institute of Mental Health released the results of a workgroup comprised of leading health behavior theorists tasked with identifying the key constructs and processes salient to understanding risky health behavior related to HIV/AIDS. As reported, the three leading behavior theories were identified as the health belief model, social cognitive theory, and the theory of reasoned action/planned behavior. Theories of self-regulation/self-control and subjective culture/interpersonal relations were also recognized as contributing to understanding health behavior. From their review, the

expert panel outlined eight key variable domains for understanding and predicting health behavior: intentions, environmental constraints, skills, anticipated outcomes/attitudes, norms, self-standards (personality characteristics), emotions, and self-efficacy. It was agreed that the first three factors are sufficient to produce behavior and the other five influence the strength and direction of intentions. However, the panel could not agree on the hypothesized link among the variables (Fishbein, et al., 2001).

From this work, Jaccard, Litardo, and Wan (1999) developed the unified theory of behavior (UTB) (Olin et al., 2010). This theory is divided into two sections: immediate determinants of behavior and immediate determinants of behavior intentions (Figure 2).



*Figure 2. Unified theory of behavior. Reprinted from “The Application of Behavior Change Theory to Family-Based Services: Improving Parent Empowerment in Children’s Mental Health,” S.S. Olin et al., 2010, *Journal of Child & Family Studies*, 19, 462-470.*

The immediate determinants of behavior reflect intentions to perform a behavior moderated by enabling or constraining factors, including knowledge and skills, environmental constraints, salience, and habit/automatic processes. Immediate determinants of intentions are the motivational factors that contribute to the development of intentions, including attitude, social norms, beliefs/expectancies, self-concept, affect/emotions, and self-efficacy (Olin et al., 2010).

This theory is similar to the theory of planned behavior, but separates the constructs of perceived attitude and perceived behavioral control into its component parts and includes characteristics of the person, similar to the health belief model (Rosenstock, Stretcher, & Blecker, 1988) that might affect perceptions and cognitive processes. Also, similar to the theory of planned behavior, this model does not account for the interaction with the service to predict repeat use, but is rather a flexible, general model.

Child Abuse Prevention Participation Models

Two models have recently been developed to specifically assess parent engagement and retention in child abuse prevention services. The first, by McCurdy and Daro (2001) is referred to as a conceptual model of parental involvement in family support (Figure 3). Drawing on the theory of planned behavior and empirical research on child abuse prevention services, the model specifies key factors that affect intentions, enrollment, and retention in services. Additionally, it is an ecological model that identifies these factors at the individual, provider, program, and neighborhood levels. Certain factors are hypothesized as the primary influencers of behavior, where as others that are thought to play a minor, secondary role. Each of these factors contributes independently to intentions, enrollment, or retention. Specifically, individual factors –

attitude toward the service, cost-benefit calculations, readiness to change, subjective norms, and past program experiences – are theorized to be the primary determinants of intention to enroll, with provider, program, and neighborhood factors secondary. Intentions are considered a primary predictor of enrollment, with individual perceptions of subjective norms and program factors acting as drivers of intentions. The final stage, retention, has primary predictors stemming from individual factors related to experience with the program, provider and program factors that are also related to quality of services

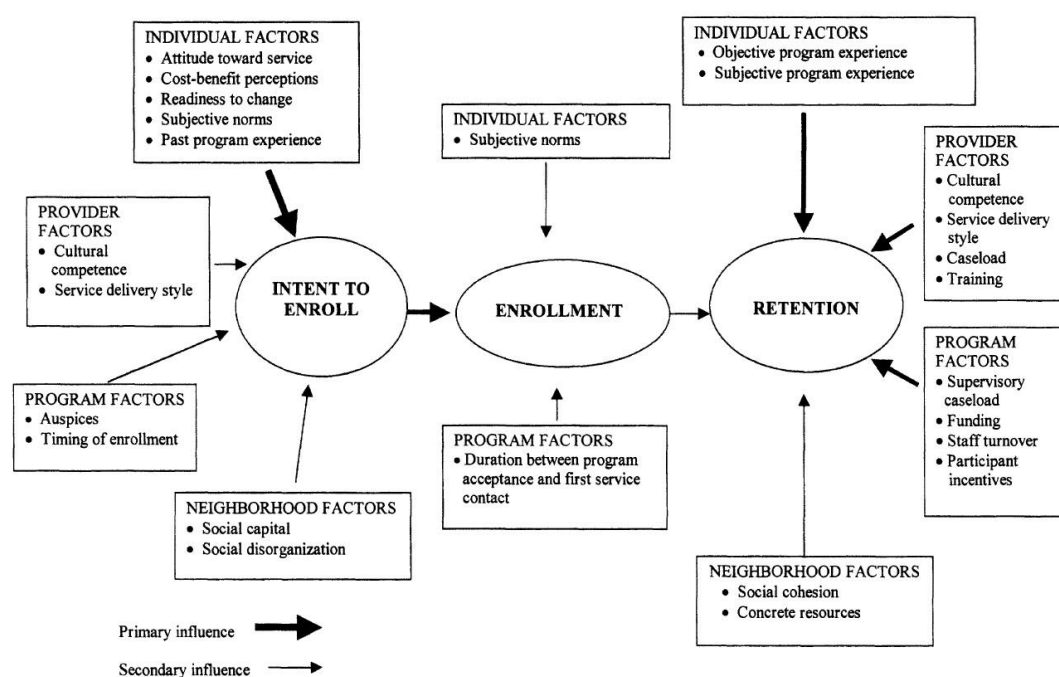


Figure 3. Conceptual model of parent involvement. Reprinted from “Parent Involvement in Family Support Programs: An Integrated Theory,” K. McCurdy & D. Daro, 2001, *Family Relations*, 50(2), 113-121.

and responsiveness to families, and secondary predictors stemming from neighborhood factors. Additionally, re-appraisal of social norms, as well as interactions with providers and factors such as enrollment delays, contribute to whether intentions lead to retention through an enrollment stage.

Randolph, Fincham, and Radey (2009) also developed a model that they refer to as a conceptual model for engaging parents in prevention (Figure 4). Drawing on the health belief model, theory of planned behavior, and Minuchin's (1974) family systems theory, this model involves a chain of constructs that lead to intentions, which mediate the relationship of these prior constructs to service usage (engagement). Specifically, cues to action are theorized to lead to perceptions regarding susceptibility and severity of problems, which in turn lead a parent to value a new behavior. This leads to an analysis of the perceived benefits and barriers to taking action, which are also spurred by cues to action. For example, receiving information on the long-term negative health effects of childhood obesity while attending a parent night at an elementary school might lead a parent to consider whether his/her child is at risk of the costs and barriers lead to two more considerations: 1) expected benefit and 2) self-efficacy. Cues to action are again considered at this stage. Finally, a choice is made to engage in services (intention) and this leads directly to service use, termed engagement (Randolph, Fincham, & Radey, 2009). While this theory incorporates two of the dominant health behavior theories -- health belief model and theory of planned behavior -- the specific process through which services are continued is not specified.

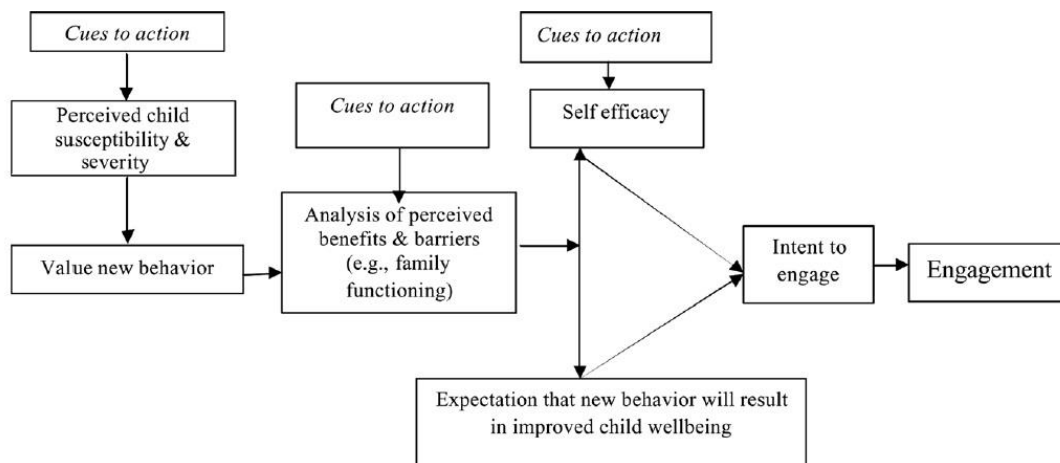


Figure 4. Conceptual model for engaging parents in prevention. Reprinted from “A Framework for Engaging Parents in Prevention” K.A. Randolph, F. Fincham, & M. Radey, 2009, *Journal of Family Social Work*, 12, 56-72.

Self-determination Theory

Self-determination theory (SDT; Ryan & Deci, 1985) provides a means of understanding a key cognitive influence for parents that might be pressured into services, that of autonomous self-governance. This theory has been used independently to assess the effects of external pressure on motivation (e.g. Vallerand & Bissonnette, 1992) and in conjunction with the theory of planned behavior to account for more general cognitive influences (e.g. Hagger, Chatzisarantis, & Biddle, 2002). According to the theory, people are more likely to perform a behavior if they are intrinsically motivated to do so (Ryan & Deci, 2006).

Intrinsic motivation stems from a high degree of autonomy, or self-governance, whereas extrinsic motivation is the result of external coercion. However, there are three other degrees on the scale between fully intrinsic and fully extrinsic motivation; introjection, identification, and integration, as well as amotivation, which is an alternative state to motivation (Ryan & Deci, 2006). Introjected motivation is the partial assimilation

of the external forces; identified motivation is when a person values the actions they are taking; and integrated motivation reflects both personal valuation and congruence with personally held values. Fully intrinsic motivation occurs when someone performs a behavior for the simple enjoyment of doing it (Ryan & Deci, 2006). People engaging in social services would likely not fall into this category. The closer to intrinsic motivation they fall on this continuum, however, the more likely they are to engage in the services and have meaningful participation.

This leads to an important caveat regarding our assumptions that a person engaged in a voluntary prevention service is indeed volunteering, and therefore fully invested in and desiring of the service. This might not necessarily hold true. Some people may be responding to external pressure and others may be ambivalent, neither agreeing nor resisting (Pescosolido, Gardner, & Lubell, 1998). However, engagement practices that foster empowerment may yield introjected motivation for pressured service participants, while integrated motivation is only possible in autonomous contexts (Ryan & Deci, 2000).

Self-determination theory provides an important means of understanding the degree of autonomous self-regulation in service involvement and has been paired with the theory of planned behavior. A meta-analysis of studies published before September 2008 (the first study identified was published in 1999), identified 36 studies that combined the theory of planned behavior and self-determination theory to understand health behavior and provided sufficient equivalency amongst measures to conduct a valid meta-analysis (Hagger & Chatzisarantis, 2009). From the results of the meta-analysis, a path analysis was conducted, which supported a theoretical model that depicted self-determined

motivation as a precursor to the theory of planned behavior constructs of attitude, social norms, and perceived behavioral control, as well as having direct and indirect effects on intention and behavior.

Summary

These theories and models have considerable agreement on the key factors that motivate someone to engage in a behavior. The motivating factors predominantly fall into three categories: psychological, social and interactional with the intervention. Those that are psychological are primarily located within the individual, while those that are social are heavily influenced through interactions with important others, such as friends, family, and neighbors. Those related to the intervention involve the interaction of the psychological and social factors with the intervention to predict continued service use for those that have entered the door of a provider.

In brief, there are proximal predictors of intentions that are cognitive states, whether psychological or socially derived, that are influenced by distal predictors that reflect factors that give rise to cognition. Once intentions are formed, there are factors that might intervene in the enactment of intentions. After a person enters the door of a center and interacts with staff, there is likely a re-appraisal of the cognitive factors and intentions to return, or not, developed. The next section will discuss the key cognitive motivating factors that emerge from the theories and models as likely proximal predictors of repeat service use.

Key Motivating Factors Emerging from Theories and Models

Psychological-based Factors

Perceived Need. The models discussed previously that address parent involvement in family support programs suggest that parents engage in services based on a conscious appraisal that they or their family has a problem or need. Perceptions of the problem are malleable, as they are socially determined, rather than based on objective standards. For example, parent's perceptions of their child's mental health needs tend to diverge from professional and diagnostic criteria (Broadhurst, 2003). Many people with serious mental health problems do not seek care based on objective criteria, but rather wait until they perceive their problems to be worse than those of people around them, lending support to the notion that perceptions of the need for help derive from a social comparison of what may be "normal" (Broadhurst, 2003; Mojtabai, 2008). Perceptions of need are distinct from expectation of benefit from a particular activity that might be used to address the need. However, Weinstein (2007) cautions that perceptions of need may be aligned to be congruent with behavior, rather than the drivers of behavior.

A study of the Healthy Families America program lends credence to the subjectivity of need (McCurdy et al., 2006). Healthy Families provides home visits on a graduated schedule (i.e. more frequently in the beginning and less as the child matures) during which the home visitor works with the family on developing and enacting a family service plan and coaches the parents on age appropriate play with their child. Families of newborns are screened at some hospitals for risk characteristics and offered the program. A longitudinal, non-experimental study was conducted of 343 new parents from eight Healthy Families programs across five states (McCurdy et al., 2006). Parents completed

surveys at the time of enrollment, including intentions to enroll, and this data was compared to participation in at least one home visit for two groups: 1) all participants and 2) post-partum enrollees only. An index of concrete and relational needs, which included concerns about the infant, was related to intentions to enroll in the program, but was not significant in participation in at least one home visit for all participants or post-partum enrollees (McCurdy et al., 2006). However, lower birth weight was related to intentions to enroll and predicted receipt of at least one home visit amongst post-partum enrollees. This might suggest that specific concerns are a more powerful predictor than index concerns. In other words, parents get involved in services for their own specific reasons and not necessarily due to objective standards and all that a service provider has to offer.

However, it is not clear that a problem-oriented perspective will be relevant in every type of service environment. Activities that are seen as enhancing family functioning might not be viewed as addressing a “problem”, such as family fun nights or participating in a community garden. Even home visits, when provided through a universal program model, might not be seen as problem-oriented. For example, the Parents as Teachers (PAT) model was developed to be a universal, home visiting model to assist all parents in being the best first teachers of their children that they can be (Pfannenstiel, Seitz, & Zigler, 2003). When normalized across socio-economic groups, participation might be viewed as giving their child and family every advantage, instead of addressing a deficit.

Other theories reviewed (i.e. TPB and UTB) incorporate an attitudinal construct (i.e. attitude towards the behavior to be performed), instead of perception of need. Attitudes are related to the particular behavior that is being predicted, which could be the

process that is being used to achieve a future goal (e.g. service use or exercise) or the future state (e.g. parenting behavior or weight loss).

However, the attitudinal construct is not necessarily neutral or positive; it could be used to measure a need, such as in the trans-theoretical model. This model was included in McCurdy and Daro's conceptual model of parental involvement in family support. Readiness to change is a concept derived from the trans-theoretical model, which proposes that a person moves through various stages that indicate their degree of readiness to change their behavior (TTM; DiClemente & Prochaska, 1985; Prochaska & DiClemente, 1983). Whether this concept is relevant to child abuse prevention/family support programs is likely related to the degree of awareness of problem behavior. Awareness of a problem progresses in this model from unaware, in the pre-contemplation stage (stage 1), to beginning awareness at the contemplation stage (stage 2), and aware of a problem and taking small steps to change at the preparation or ready stage (stage 3) (DeClemente & Velasquez, 2002). Tertiary programs, which address actual abuse and neglect after it has occurred and are under the direction of the child protection agency, are clearly an appropriate environment in which to employ this perspective. However, services to populations that are being enticed to expand their knowledge and skills in a voluntary capacity may be motivated by a desire to be the best parent they can be, without simultaneously perceiving a problem.

In strengths-promoting services, such as Family Success Centers, a problem-oriented, deficits approach may have limited utility. Further, as participants of these services have a menu of options from which to choose, their attitude towards participation may reflect a willingness to participate in some services and not others.

Therefore, type of service sought might be an important dimension of an attitudinal construct approach. Further, integrated motivation might address the inherent limitations of the perception of problem or attitudinal construct for universal, voluntary family support services.

Integrated Motivation. The degree to which a person is performing behavior that they desire for their own reasons, as opposed to in reaction to external pressures, may also be an important cognitive attribute. Based on self-determination theory, people are more likely to perform a behavior if they are intrinsically motivated to do so, as opposed to coerced or pushed into services (Ryan & Deci, 2006). In activities that person might engage in just for enjoyment, such as taking a painting class, intrinsic motivation is the highest state that might be achieved. However, in a service-based environment, integrated motivation is likely more appropriate, as it reflects congruence with values. Further, the behavior that is gauged could be the activity that one is engaging in, rather than just the future desired state that might be the reason for the motivation. Integrated or other levels of intrinsically oriented motivation have also not been utilized in studies of family support programs, but have demonstrated a relationship to health related behavior change (see Ryan, Patrick, Deci, & Williams, 2008; Williams, Cox, Hedberg, & Deci, 2000), as well as perceptions of benefit and engagement in treatment services (e.g., Wild, Cunningham, & Ryan, 2006).

Self-efficacy. Self-efficacy is belief in one's ability to attain their goals and overcome obstacles (Bandura, 2006; Schwarzer & Jerusalem, 1995). This belief is situational, such that a person who has a high degree of self-efficacy in one aspect of their life might not have the same degree of self-efficacy in another area of their life

(Bandura, 2006). It is also conceptually different than intentions, which is what a person believes they will do, but rather what they believe they can do and is a key determinant in the development of intentions (Bandura, 2006). Parents' beliefs that they can meet the needs of their family and acquire resources, information, and support is likely the derivation of self-efficacy that would be applicable for service usage at a family resource and support program. Self-efficacy is affected by a parent's past experiences in this area and is an appraisal of their experience and known barriers in their lives (Olin et al., 2009).

Perceived behavioral control – the construct used to measure contextual self-efficacy in the theory of planned behavior -- was found to account directly for 2% of the variance in behavior in a meta-analysis of studies using the theory of planned behavior constructs by Armitage and Connor (2001). However, they stipulated that this finding was tenuous. A non-experimental survey of 443 undergraduate students found that self-efficacy did not predict use of online mental health support groups. However, self-efficacy did interact with mental health problem severity and perceived vulnerability in predicting perceptions of the possible usefulness of online support. Further, Whittaker (2008) has noted that self-belief in the ability to follow through with program goals (i.e. self-efficacy) may effect perceptions of personal benefits. Therefore, studies that measure related constructs, like expectations of benefit, might not find an independent effect of self-efficacy. Self-efficacy was not commonly included in the other empirical family support research reviewed in this dissertation.

Expectation of Benefit. Expectation of benefit from services is a common construct in all of the theories and models reviewed. Decisions may be influenced by a

cost-benefit assessment of the potential gain in comparison to the loss of autonomy, privacy, time and potential social stigma of experiencing the particular problem (Broadhurst, 2003; Fishbein et al., 1997; Goldsmith et al., 1998; McCurdy & Daro, 2001). Cost-benefit assessments are a more recent addition to health behavior theories in the mental and physical health fields (Eiraldi, Mzzuca, Clarke, & Power, 2006). However, behavior might not be based on an exhaustive, objective, cost-benefit analysis, but rather what people think are most relevant, suggesting that the importance factors may be highly personal (Pescosolido, 1991).

In the aforementioned study of families enrolled in a Healthy Families program, expectations of cost and benefit were measured a number of ways (McCurdy et al., 2006). An index of the expected benefits of the program -- to the parent, baby, partner or father of the baby, and the entire family -- was positively related to intentions to enroll in the program for all participants and post-partum enrollees. The index was also related to participation in at least one home visit for participants overall, but not post-partum enrollees. This might suggest that new parents, and perhaps therefore parents experiencing stressful or novel experiences, may be less stable in their appraisals of costs and benefits. Over time, parents might gain more information on what they need, other opportunities might arise that seem more beneficial, or they may gain more information about the program that causes it to seem less beneficial. These situations would be particularly relevant to their earlier appraisal of costs and benefits and cause these particular views to shift.

Social-based Motivator

Social Norms. In regards to norms, numerous theories and models maintain that people act in congruence with their perceived social network norms (i.e. TPB, UTB, PIFS). While social norms influence the decision to initially seek services, according to the parent involvement in family support theory, it is also likely reappraised once a person enters a service. There is considerable empirical support for the influence of perceived social norms on behavior (Borsari & Cari, 2003; Campo, Brossard, Frazer, Marchell, Lewis, & Talbot, 2003; Okun, Karoly, & Lutz, 2002). However, there may be two types of social norms, injunctive norms and descriptive norms (Manning, 2009). Injunctive norms are perceptions of what other people want you to do, while descriptive norms are our observations or inferred behavior of others in our social network (Manning, 2009). Descriptive norms may act in the opposite direction than expected, as people may choose to act in congruence or incongruence with their social networks (Stok, Ridder, de Vet, & de Wit, 2012). Also, descriptive norms have been found to have a stronger effect when injunctive norms are absent (Manning, 2009). Perceptions of norms may be hypothetical before performing the behavior (Manning, 2009) and reassessed after performing the behavior, such as interacting with a service provider, gathering further information about the particular service and sharing this with others (McCurdy & Daro, 2001).

A meta-analysis of 196 studies that utilized the theory of planned behavior found empirical support for injunctive social norms' direct effects on behavior and indirect effects through intentions (Manning, 2009). The direct effects may be due to reappraisal that occurs when performing a behavior (McCurdy & Daro, 2001) and differential effects

of the different types of social norms (Manning, 2009). Descriptive norms have not been routinely included in studies of voluntary child abuse prevention and family support, but other studies of behavior might be instructive. In a study of predictors of recycling behavior for 164 3rd-year psychology students, social injunctive norms were not significantly related to the target outcome, while descriptive norms were significantly correlated with behavior (White, Smith, Terry, Greenslade, & McKimmie, 2009). In the multivariate analysis - that included intentions, perceived ability to perform the behavior, favorable attitudes towards recycling, injunctive and descriptive norms, and moral obligation - neither were significantly associated with the outcome of interest.

Intervention-based Motivator

Family Support Practice Approach. In theories that address repeat service use, the interaction with the service provider is an important construct to understanding repeat use. While the strengths-based ethos has been a tenet of social work practice for many years, there is no clear, generally accepted standard or criteria for establishing strengths-based practices (Green, McAllister, & Tarte, 2004). The following practices, however, might be considered elements of a strengths-based orientation: 1) building on family strengths and empowering them to do things for themselves, 2) cultural competence and cultural respect, 3) supportive relationship between helper and parent, 4) improving informal support for parents, 5) partnering between staff and parents, 6) community contextual knowledge, 7) knowledge of other community providers, 8) family-centered approach, 9) goal-oriented practices, and 10) individuation of services to meet family needs (Dunst, Trivette, & Deal, 1994; Green, McAllister, & Tarte, 2004; Herman, Marcenko, & Hazel, 1996, Koren DeChillo, & Friesen, 1992). Certain strengths-based

practices may contribute to the development of intentions, while others contribute to retention and outcomes. McCurdy and Daro (2001) noted that three strengths-based factors have implications for the development of intentions; cultural competence, service delivery style, and communication style. Other strengths-based practices, such as goal-oriented practices, improving informal supports, and building on family strengths, logically require some time to have passed during which services would be provided.

The core concepts noted above - empowerment, partnering, family-centered, building on strengths, and demonstrating respect and cultural competence - are key qualities of help-giving behavior that are endemic of a family support approach (Everett, Homstead, & Drisko, 2007). Empowerment has been described as a state and process (Singh, Curtis, Ellis, Nicholson, Villani, & Wechsler, 1995). As a process, it is "a process whereby individuals gain control over their own lives by influencing their interpersonal and social environments" (Singh, et al., 1995, pg. 85). As a state, it is "the ability of individuals to gain control socially, politically, economically, and psychologically" (Becker, Kovach, & Gronseth, 2004, p. 328).

Partnering with families implies power sharing, whereby recipients of services have a degree of decisional and informational control. Decision control is "giving the subjects the power to make decisions that would otherwise be made by others" (Monahan et al., 1995, p. 258). Information control refers to "the sense of control achieved when a person obtains or is provided with information about a stressful event" (Monahan et al., 1995, p.258-259). Family-centered services are services that those that view the family as a unit, rather than focus on individuals in a vacuum (Allen, 1996). Strength-based practices might be considered a range of practices, as mentioned previously, as well as a

particularized approach of focusing on strengths, rather than deficits, and improving protective factors (Green, McAllister, & Tarte, 2004). Respect for the family and the relationship between the worker and the family or, more broadly, the provider and the family has often been noted as an important contributor to service usage (Burt, Duke, & Hargreaves, 1998; Girvin, DePanfilis, & Daining, 2007; Green, McAllister, & Tarte, 2004). Finally, cultural competence involves the demonstration of respect and knowledge regarding a family's beliefs and norms (Green, McAllister, & Tarte, 2004).

Research has demonstrated an important link between the practice approaches of helping professionals and the quality and length of engagement in services (e.g. Girvin, DePanfilis, & Daining, 2007; McCurdy et al., 2006). Studies of child maltreatment prevention programs indicate that qualities of the practitioner contribute to service use (e.g. Daro, McCurdy, Falconnier, & Stojanovic, 2003; Girvin, DePanfilis, & Daining, 2007; McCurdy et al., 2006). For example, in a retrospective study of 816 parents participating in services with 176 home visitors from 17 Healthy Families American programs found that the assigned home visitors accounted for nearly 18% and program accounted for just over 14% of the total variance explained by the model in the number of months the parent participated (Daro, McCurdy, Falconnier, & Stojanovic, 2003). This suggests that some home visitors are more effective in engaging families to participate. Further, an experimental study of 154 parents participating in a voluntary family support service targeted to at-risk families randomly assigned parents to a 3-month or 9-month intervention and interviewed them upon exit from service (Girvin, DePanfilis, & Daining, 2007). Of the 154 participants in the intervention, 136 completed the interview. Bivariate analysis found that having more children and a positive appraisal of the relationship with

the worker was related to service completion. In the multivariate analysis, the odds of completing were higher for higher depressive symptoms, a positive relationship with the worker, and shorter-length of service. This extant research suggests that qualities of the practitioner have an effect on service use. Further, services provided in environments styled as employing family support principles should not be assumed to achieving them. For example, a qualitative study of 20 families participating in a family support program for families of children with disabilities -- that was styled as using a “family-directed” approach -- found that families felt clinicians directed the planning process and left them feeling disempowered and disrespected (Racino, 1998).

Mediating Motivator

According to the theory of planned behavior, people enact their intentions, which are the result of cognitive and socially derived motivators (Ajzen, 1991). Other theories have adopted the intentional construct, including the unified theory of behavior, conceptual model of parental involvement in family support, and the integrated model for engaging parents in prevention draw upon it heavily (McCurdy & Daro, 2001; Olin et al., 2010; Randolph, Fincham, & Radeey, 2009). However, Ajzen (1991) holds that intentions are only a partial mediator, as a person may have innate limitations in their ability to enact their intention, specifically through perceived self-efficacy and objective ability that they are not fully cognizant of when forming their intentions.

There is considerable support for the intentional construct, as evidenced by the numerous studies and meta-analyses of studies that continue to proliferate (e.g. Cooke & French, 2008; Painter, Borba, Hynes, Mays, & Glanz, 2008). Specifically, a meta-analysis of studies using the theory of planned behavior constructs published in peer

reviewed journals up to the end of 1997, found that the typical model (i.e. attitude, subjective norms, perceived behavioral control) explained 39% of the variance in intention, on average (Armitage & Conner, 2001). Further, intentions accounts for 22% of the variance in behavior, on average. Further, a review by Ajzen (1991) of twelve studies conducted between 1984 and 1990, found that only two studies had null findings on the relationship between intentions and behavior, while six other studies had null findings of the relationship between perceived behavioral control and behavior. The models predicted between 23% and 84% of behavior.

There are limitations, however, to the effects of intentions. A meta-analysis of 47 experimental studies testing the effect of interventions to on the intention-behavior relationship found that a moderate-to-large change in intentions only resulted in small-to-moderate improvements in behavior (Webb & Sheeran, 2006). Further, those effects may be overestimated as the intervention continues to have effect after controlling for intentions, suggesting that intentional control of behavior is somewhat limited. The intentional construct is also highly reliant on the rational choice approach, point-in time assessments, and is susceptible to social desirability bias (Chatzisarantis & Hagger, 2008; Weinstein, 2007). Additionally, a person's intentions may be aligned with behavior, rather than cause behavior (Webb & Sheeran, 2006).

Nonetheless, there is interest in intentions, as the enactment of intentions may be malleable to intervention (Conner, Sandberg, & Norman, 2010). It may also indicate buy-in, as opposed to merely compliant behavior for individuals that are responding to social pressure. Individuals that exhibit disguised compliance are those that participate in services, but miss appointments and do not intend to implement the advice of the service

provider (Sanders & Roach, 2007). These individuals may have low intentions, but still participate in services to a moderate extent. Conversely, individuals with high intentions that do not enact their intentions may have been inhibited by an outside force, but also may have given the socially desirable response or indicated intentions that were not fully formed (Azjen, 1996; McCurdy & Daro, 2001; Olin et al., 2009).

The effect of intentions on behavior may also be moderated by conditions that effect the extent of volitional control a person has over the behavior (Webb & Sheeran, 2006) For example, in a study of 126 homeless people that were seeking services, perception of need and injunctive social norms predicted degree of service use over a 25-day period (Christian & Abrams, 2003). Perceived control (i.e. self-efficacy or the belief in the ability to perform the behavior), however, did not predict the degree of service use over a 25-day period. Analysis did not support the traditionally held mediating role of intentions. Instead, the relationship between intentions and service use was moderated by subjective norms, such that intentions had a stronger effect on service use when social norms were weak (i.e. social groups were perceived to be unsupportive of service use).

Intentions may also be effected by time and be better predictors of short-term behavior than even moderate-term behavior (Webb & Sheeran, 2006). For example, a study of 451 mothers that completed registration for a manualized parenting program provided through preschools, found that high levels of stress (need) and few time constraints (lack of barriers) predicted intentions to enroll (Dumas, Nissley-Tsiopinis, & Moreland, 2007). Attendance was predicted by availability of time and being single, as opposed to married. Intentions did not predict attendance, but did predict an interim step

of formally enrolling in the program. Stress, utilized as an indicator of need, also predicted enrollment, but was mediated through intentions.

A longitudinal, non-experimental study of 343 new parents from eight Healthy Families programs across five states also found no relationship between intentions and participation (McCurdy et al., 2006). Parents completed surveys at the time of enrollment, including intentions to enroll (conceived here as utilizing services), and this data was compared to participation in at least one home visit. Significant variables related to intentions in the multivariate analysis included an index of needs, expectation of benefit, perceptions of the home visitor, and racial/ethnic minority status. Injunctive social norms and perceptions regarding costs of participation were significantly related to intentions in the bivariate analysis, but not in the multivariate (McCurdy et al., 2006). Variables significantly related to enrollment (i.e. participation in at least one home visit) only included one of those factors, perceptions of the home visitor, as well as living with another adult relative, future housing stability, and enrolling prenatally. Further analysis, however, did reveal differences between three groups - enrolled participants, parents that refused services (active avoiders), and parents that stated they would participate, but then were never available (passive avoiders) - on the index of need, perceptions of the home visitor, expectations of benefit, injunctive social norms, minority status and prenatal enrollment, suggesting that these are important characteristics to understanding service use.

Other Personal Characteristics

Past Behavior/Habitation. Past behavior, or habituation, may be indicative of future behavior. The role of past behavior presents a challenge for health behavior

models, as there is no agreed upon perspective on their role. It is possible that under conditions where the behavior in question is familiar to people, their perceptions of the motivating factors have already been influenced with their experience and thus, past behavior predicts much of future behavior (McCurdy & Daro, 2001; Skar, Sniethotta, Araujo-Soares, & Molloy, 2008; Weinstein, 2007). Additionally, past behavior may be viewed as a moderator (Skar, Sniethotta, Araujo-Soares, & Molloy, 2008), the implication being that for people for whom the behavior is habitual, past behavior will be highly predictive of future behavior (Weinstein, 2007). This is congruent with cognitive dissonance theory, which suggests that people align their cognitions to fit their behavior, rather than their behavior following from cognitions (Anshel et al., 2010). For those that have intermittent performance of the behavior, this is less the case and behavior that is novel has the least likelihood of predicting future behavior (Weinstein, 2007).

Demographics. Demographic characteristics may also be contextually important and represent characteristics of the individual highlighted in every major health behavior theory. In particular, race/ethnicity may have an effect on service usage through group norms. Research on the cultural influence of perceptions of problems suggests that African American parents may be less likely than other parents to attribute a problem to something that is based in the individual and is malleable, instead attributing some problems to societal factors. However, African American parents are more likely to access formal services, as opposed to informal services, once a determination has been made that help is needed. Non-Hispanic White families, in contrast, are more likely to go to extended family for support (Srebnick et al., 1996). The aforementioned studies of

Healthy Families use found that parents from racial/ethnic minority groups were more likely to be retained in the program (Daro et al., 2003; McCurdy, 2006).

According to Dumas and colleagues, studies have found varied results in regards to the association of education, marriage or cohabitation, age, and family income with service engagement. For example, a longitudinal study of 531 mothers of newborns found that living with a husband or partner, having greater concrete support from social networks, and being employed was related to lower social service use of various types, while past participation in social services was positively related to service use two years after their child's birth (Speilberger & Lyons, 2009). Daro and colleagues (2003) found that older age and unemployment were positively related to participation in at least one home visit. However, a study of 136 families participating in a center-based family support service found that age was not a predictor of attrition (Girvin, DePanfilis, & Daining, 2007). Further, younger parents and those with less education were more likely to drop out in a study of another parenting program (Nicholson, Brenner, & Fox, 1999). These demographic variables could be related to availability or other enabling or disabling factors. Education could also be related to cognitive ability and other attributes of the person that facilitate education.

Summary of Motivating Factors

From the review of relevant theories and models, a number of person-level constructs were identified that may have relevance to understanding repeat service use in a universal, voluntary family support service. Perceptions of need are included in a number of theoretical models, but are most likely relevant for services addressing problems or concerns. Attitudinal qualities, such as the type of service desired, degree of

importance, the reasons that a person is engaging in services, and whether these reasons stem from integrated motivations, should relate to a commitment and interest in service usage. Self-efficacy is one way of understanding the degree of control a person thinks they have over some aspect of their life and is highly situational. A person with high self-efficacy might have a greater sense that they can achieve their goals and demonstrate commitment to that effort, both in regards to entering services and in regards to remaining in services, than someone with low self-efficacy. Expectations that services will be more of a benefit than a burden would bring a person to services and keep them there as long as these remained true.

Also, according to the theories reviewed, social interactions influence behavior by creating perceptions of normative expectations. Perceived social norms of important others are theorized to influence whether formal services are considered an acceptable means of addressing a problem. While this has primary influence over whether to seek services, it remains relevant to remaining engaged in services as people may not be fully aware of the opinions of their social networks until they become engaged in services. Once the parent interacts with the service provider, practices that reflect empowerment and strengths-based practices are likely to sustain interest in services. Demographic characteristics may also be predictive as they are proxies for underlying cognitive and social characteristics. Related to psychological motivations, this study will explore the relationships between person-level factors and repeat service usage. It is expected that the type of circumstance that brought a person to services, expectations of benefit, self-efficacy, and integrated motivation will be related to higher repeat service use. Related to socially derived motivations, this study will explore the relationships between injunctive

norms and descriptive norms, and repeat service usage. It is expected that both types of social norms will be related to repeat service use. In addition to examining characteristics of individual service users, this study will explore the relationship between an intervention-based factor -- family support practices -- and repeat service use. It is expected that family support practices will be positively related to repeat service use.

The psychological, social, and intervention-based factors are elements of individual motivation for service use, which ultimately coalesces in a formation of intentions to use services. It is expected that intentions mediate the relationship between psychological, social, and intervention-based motivators and service use. Additionally, past behavior may be indicative of future behavior (Weinstein, 2007), although its method of interaction is less clear.

Current Study

Key constructs and processes were chosen for this study, based on the review of relevant behavior theories and models previously described (Figures 1). This emergent approach to theory development, by integrating elements of multiple theories and empirical observations, may provide greater utility for program developers searching for intervention opportunities than strict adherence to a particular theory (Crosby & Noar, 2010; Randolph, Fincham, & Radeey, 2009; McCurdy & Daro, 2001; Olin et al., 2010). What this study seeks to address is greater understanding of the key constructs and processes relative to service use in a voluntary, center-based service that involves a high degree of individual choice-making and low degree of formal service structure. Further, this service model differs from many others in that it does not presuppose a deficit or problem that needs to be addressed.

This study will examine the key proximal predictors of intentions identified from the theories and models reviewed, as well as their relationships to repeat service use. Several constructs included the theory review are not included in this study due to constraints in the project, including barriers towards service use (ex. transportation, child care, or changes in availability) and personal capacities (ex. mental health problems or cognitive limitation) included in the unified theory of behavior (Olin et al., 2010). It is expected that intentions will fully mediate the relationship between the proximal predictors of intentions and repeat service use, therefore a three-step mediation model will be tested in the manner prescribed by Baron & Kenny (1986) as represented by the following three research questions.

Research Questions and Hypotheses

Q1: To what extent are psychological, social, and intervention-related motivating factors, as well as past service use, related to repeat service usage? It was hypothesized that extent of past service use, type of perceived need, expectations of benefit, degree of self-efficacy, level of integrated motivation, endorsement of injunctive and descriptive social norms, and perceptions of family support practices will be positively associated with repeat service use.

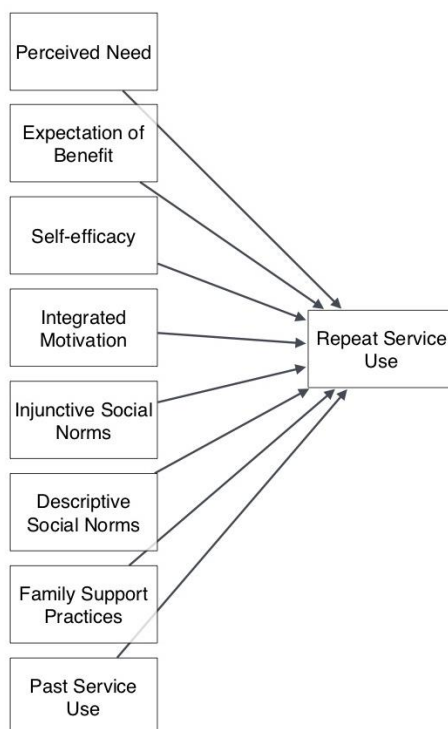


Figure 5. Model depicting hypothesized relationships between repeat service use and psychological, social and intervention-related motivating factors, as well as past behavior.

Q2: To what extent are psychological, social, and intervention-related motivating factors, as well as past service use, related to intentions? It was hypothesized that extent of past service use, type of perceived need, expectations of benefit, degree of self-efficacy, level of integrated motivation, endorsement of injunctive and descriptive social norms, and perceptions of family support practices will be positively associated with level of intentions to return to the FSC.

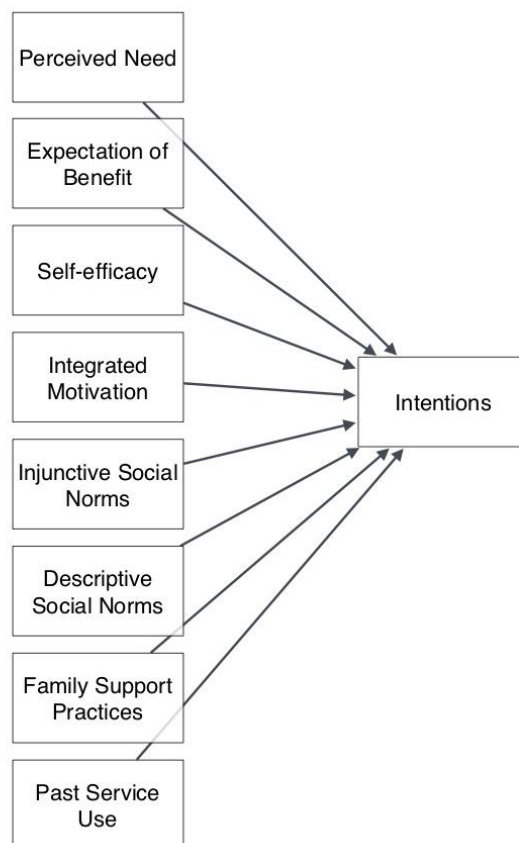


Figure 6. Model depicting hypothesized relationships between intentions and psychological, social, and intervention-related motivating factors, as well as past behavior.

Q3: To what extent are the relationships between repeat service use and psychological, social, and intervention-related motivating factors, as well as past service use, mediated by intentions? It was hypothesized that intentions to return to the FSC would fully mediate between repeat service use and the predictor variables of the extent of past service use, type of perceived need, expectations of benefit, degree of self-efficacy, level of integrated motivation, endorsement of injunctive and descriptive social norms, and perceptions of family support practices.

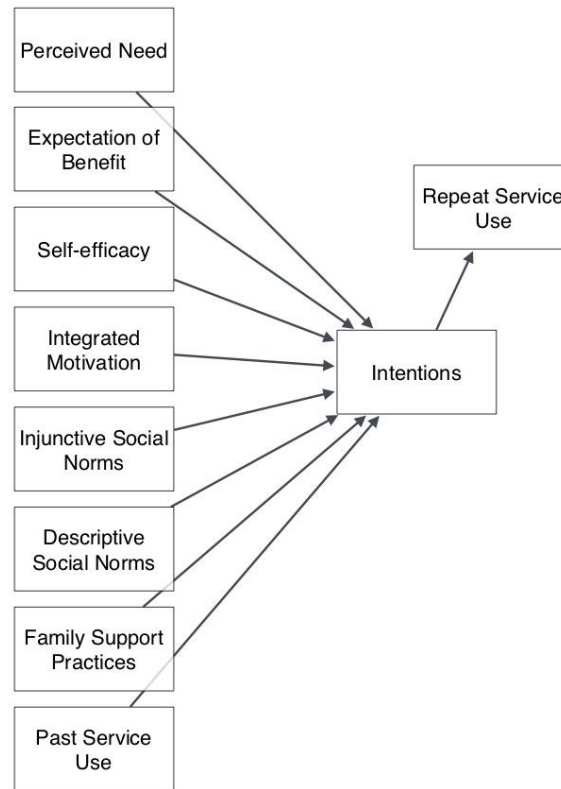


Figure 7. Model predicting intentions fully mediating the relationship between repeat service use and perceived need, expectations of benefit, self-efficacy, integrated motivation, injunctive social norms, descriptive social norms, family support practices, and past service use.

CHAPTER 3

METHODS

Study Design

This was a prospective, non-experimental, longitudinal study that was part of a larger exploration of services provided at the FSCs in New Jersey. The sampling had two stages; five FSCs were recruited, from which 115 parents total were recruited. In-person interviews were conducted with new participants of the FSCs that were parents or caregivers of children age 18 or younger, shortly after their initial entry into an FSC. Administrative data was later obtained on service use for the participants of the study. Institutional Review Board approval was granted by Rutgers, The State University of New Jersey and approval was also granted by the New Jersey Department of Children and Families. The participant selection criteria will be discussed first, as it has relevance for the site selection and overall study implementation.

Participant Recruitment and Interview Procedures

FSC staff identified English-speaking parents or caregivers with children age 18 and younger that had come to the FSC for the first time, providing them with a flyer on the study and asking them if they would be interested in participating. Staff collected names and phone numbers of the families and emailed this information to the primary investigator weekly. Research staff made appointments with the families and interviewed them in-person at a location of the family's choosing, but typically at the FSC. All initial interviews were conducted in-person, during which the participant was provided an informed consent and review of the document with the researcher. Interviews typically lasted around an hour and fifteen minutes, for which participants were compensated \$35

in cash. The elapsed time between date of entry into a FSC and the interviews varied between two and twelve weeks, due to parent availability. After three months, research staff attempted to contact participants by phone for a five-minute follow-up interview, for which they would receive \$15. However, very few had working numbers or responded to phone messages. Only 19% were reachable by phone. Therefore, administrative data was relied upon for data on service use. Each FSC had a slightly different method of collecting administrative data, but each kept track of the names of their participants, the dates they attended, and in what activities they participated. This data was compiled upon request by the researcher, using a data extraction form the researcher provided.

Site Selection

FSCs were selected that met certain criteria related to the ability to facilitate this project. Specifically, space for research staff, adequate flow of new families into the FSCs (i.e. minimum 250 per year), and maturity and stability of the program (i.e. two-year minimum operation and one-year stable and fully-trained staff) were determined in consultation with the New Jersey Department of Children and Families staff to create a pool of eligible sites. FSCs were also excluded if they were in certain communities where a competing child welfare service model had been piloted or if more than 40% of their participants were Spanish-speaking only.

A total of 17 of the 39 FSCs established at the time were considered eligible for the study prior to discovering Spanish-speaking proportions. Initially, seven FSCs were selected that represented the strongest candidates according to the criteria, as well as diversity in urban density. However, FSCs directors at two sites indicated that a substantial proportion of their participants were Spanish-speaking and this appeared to be

an issue at a number of other 17 potential sites, so it was decided to recruit from five sites. Two sites were in rural communities and three sites were in urban communities.

Geographical variety was difficult to obtain due to the selection of FSCs that met the study criteria, but one site was selected from the southern region of the State.

Specifically, the southern region had a high proportion of Spanish-speaking participants utilizing the FSCs and a number of counties that were ineligible due to the other child welfare service pilot project. All others were from the northern region of the State.

Participant recruitment began in April 2012, with a target of 40 participants per FSCs anticipated within a four to six month timeframe. The Principal Investigator (PI) or research assistants were on-site at each FSC at least once per week and the PI met with each FSC's staff at the beginning of the project and mid-way through the project to promote adherence and buy-in into the study and data collection procedures.

Additionally, the PI had some opportunity to observe procedures at each of the FSCs for engagement of new-participants and methods for disseminating information to participants. However, by December of 2012 the desired numbers had not been reached and the FSCs had been burdened by the process longer than they were expecting. These FSCs were allowed to discontinue recruitment, and two more FSCs were recruited from the original list. One was from the northern and the other from the southern region of the State, and both were rural. Recruitment occurred at those FSCs from January to April 2013. However, recruitment was very slow, and these two sites only yielded 7 interviews in that time period. It was decided to discontinue recruitment for the study in April 2013 due to budget constraints and diminishing returns.

The pattern of recruitment in this study and anecdotal data from the FSCs suggests that there is an ebb and flow of new families into the FSCs that favors the fall season and tapers off after the winter holidays. Also, Spanish-speaking participants represent a substantial proportion of new families to the FSCs. These patterns were not well understood by DCF prior to the start of this study due to the manner of aggregation of the data they collect from FSCs annually.

The data used for this study is the parent data from the original five FSCs. A total of 115 parents were recruited from these centers. Table 1 – presented in the forthcoming preliminary analysis section -- reports the number of families that each FSCs referred and that ultimately participated in an interview. Response rates varied between 31% and 64%. Many of the non-respondents did not respond to attempts to reach them by phone or had numbers that had been disconnected. Similar difficulty was experienced when attempting to conduct a second interview with participants; only 19% of those interviewed were reachable by phone.

It is possible that two trends contributed to the low response rates: 1) decreasing participation in research in general (Cape, 2010) and 2) reliance on limited plans or prepaid cell phones amongst those that maintain a cell phone only (Connecticut Legal Services, 2008). In particular, 38% of all adults, 39% of African Americans, and 50% of Hispanics with telephone access in 2013 had only cell phones (Pew Research Center for the People and the Press, 2014). In a survey of low-income people calling Connecticut Legal Services, 87% of those using cell phones only had limited or prepaid plans (Connecticut Legal Services, 2008). While we did not collect data on what type of phone participants were using, it was clear that many were using cell phones with limited

minutes and intermittent termination. No data were available from the FSCs in order to make comparisons between those that participated and those that did not respond or that had refused to have their names released to the researchers, as most of the FSCs did not maintain electronic records at the time and had limited record keeping in general.

Variables

Independent Variables

Perceived Need. Perceived need was distinguished between two different types of stated need, concrete versus complex. Parents were asked at the interview “what services or assistance were you hoping to receive from the Family Success Center when you initially came for services”, which was coded by the researcher as concrete needs only (0) or complex needs (with or without concrete needs) (1). Concrete needs included anything of a direct monetary value, including assistance with housing, food, bills, clothing, furniture, food, transportation and/or obtaining public benefits. Complex needs may have included participants that requested assistance with concrete needs, but that also requested other types of services of a personal development nature. Personal development activities included interviewing skills, job skills, help with resume and job search, parent/child activities, parenting groups, driver’s education, GED/ESL classes, legal or credit guidance, nutrition, interpersonal skills and life skills. The term *complex* was used arbitrarily to indicate multiple domains of service request.

Self-efficacy. Self-efficacy was measured using the Generalized Self-Efficacy scale (Schwarzer, R., & Jerusalem, M., 1995). This is a 10-item scale, with questions such as "I can always manage to solve difficult problems if I try hard enough" and "If someone opposes me, I can find the means and ways to get what I want". Schwarzer and

Jerusalem (1995) recommend that a few questions be added to pertain to the specific environment in which the behavior would be expressed. Four questions were added to assess a parent's sense of their ability to meet their family's needs: 1) I take the initiative to look for services for my family when it is needed, 2) I make sure my family is treated appropriately by service providers and educators, 3) When I need help for my family, I am able to ask for help from others, and 4) My opinion is just as important as professionals' opinions when it comes to what my family needs. Cronbach's alpha scores on the 10-item scale have ranged from .76 to .90 in previous studies (Schwarzer & Jerusalem, 1995). Questions were on a four-point Likert-type scale and the total score was averaged. The measure of scale reliability, Cronbach's alpha, was .83 in this study.

Expectations of Benefit. Expectations of benefit, relative to costs, were measured by six questions that assess to what degree families feel FSC will improve their lives, the degree to which other responsibilities compete for their attention, and negative associations with being involved in services. Questions that assess expectations of benefit ask "If I use FSC services: 1) My family life will be much improved, 2) I will feel a lot better and 3) My family will get the help we need." Other responsibilities and costs associated with involvement were assessed by asking "I have the time needed to participate in services at this time", "I would feel proud to use services at the Center" and "I would be comfortable speaking about my family with others at the Center". The questions were written by the researcher, as there are no standardized, generic scales for expectancy beliefs in social services, nor could specific scales already developed for this type of service be identified. Questions were on a five-point Likert-type scale and the total score was averaged. The Cronbach's alpha in this study was .74

Integrated Motivation. The motivation scale was derived from scales used in previous studies (Guay, Vallerand, & Blanchard 2000; Pelletier, Tuson, & Haddad, 1997; Wild, Cunningham, & Ryan; 2006), which assess aspects of the clients' motivation, intrinsic, integrated, identification, introjected, or external regulation, as well as amotivation in specific treatment contexts. The integrated motivation subscale was chosen for this study to represent the extent to which participation was related to personal valuation and congruent with personally held values. Questions included: “I come to the FSC because it makes me feel good about myself”, “I come the FSC because I value the way these services allow me to make changes in my life”, and “I come to the FSC because through these services I feel that I can now take responsibility for making changes in my life.” Questions were on a five-point Likert-type scale and the total score was averaged. The Cronbach’s alpha in this study was .70.

Injunctive Social Norms. Injunctive norms are perceptions of what other people want you to do (Manning, 2009). The questions for injunctive social norms were derived from two studies (Conner, Sandberg, & Norman, 2010; French et al., 2005). Five questions were asked to assess injunctive norms, such as “Most people who are important to me would think that it is a good idea to get help from a community program for my family”. Answers were on a five-point Likert-type scale and the scores were averaged. The Cronbach’s alpha in this study was .70.

Descriptive Social Norms. Descriptive norms are inferences or observations of what other people actually do (Manning, 2009). Questions representing descriptive social norms were derived from a study by French and colleagues (2005), although the scale in that study was combined with the injunctive social norms scale with an overall reliability

analysis found to be .68. A combined scale was considered in this study. However, preliminary analysis indicated that the two types of social norms behaved very differently in this data set and should be used separately. Five questions were also asked to assess descriptive social norms, such as “Most people who are important to me participate in social service programs”. Answers were on a five-point Likert-type scale, and the scores were averaged. The Cronbach’s alpha in this study was .86.

Family Support Practices. Provider practices were assessed using the Family-Centered Behavioral Scale (FCBS; Petr & Allen, 1997). The FCBS is a 26-item scale that asks parents to rate the strengths-based and empowering practices of staff at social service organizations. Questions assess aspects of strength-based practices, such as "accepts our family as important members of the team in addressing our family's needs", "helps us get all the information we want and/or need", "helps us get the help we want from our family, friends, and community", and "blames me for my family's problems". The scale was originally written with the child as the focal point. Where the scale referred to child, family was inserted. Although changing a scale is a concern for the validity of the scale, there were no scales identified that could be used entirely as they were designed. This scale required the least amount of adjusting of any of the scales reviewed. The original scale has demonstrated internal consistency of .97 (Allen, 1996). Questions were on a five-point Likert-type scale, and the total score was averaged. The Cronbach’s alpha in this study was .93.

Past Behavior. Parents’ previous exposure to various social services were assessed by asking if they had used the following services in the past: parenting classes/groups, home visiting, child behavioral support, family counseling, money

management workshop/counseling, cash assistance/welfare, treatment for substance use or mental health, transitional housing services, DYFS, or parent support programs through a child care provider. How long they used the service was assessed in increments (less than 2 months, 2-4 months, 4-6 months, 6-12 months, and more than one year) and frequency (weekly, twice per month, monthly, less than one month). The data were assessed for patterns to determine the most appropriate way to construct past behavior. Frequencies tended to vary with the type of service. Three service types were constructed: concrete needs, therapeutic, and personal development. Concrete needs included assistance with transitional housing services, food banks, utility assistance, and welfare/cash assistance. Therapeutic services included individual or family counseling, child behavioral services, and treatment for mental health or substance abuse issues. Personal development included parenting skills activities, parent/child activities and money management workshops. Length of service use was reduced to none, less than 6 months (coded as 1), 6-12 months (coded as 2), and more than a year (coded as 3). A summative index of the three types was created with scores ranging from 0-9.

Dependent Variables

Intentions. Stated intention to return was a predictor and a dependent variable, which was measured by the following statement and two questions. "Some parents come to the FSC for the first time and think they could use these services, whereas other decide that they don't need these services or could get these needs met another way. How likely is it that you will use the FSC services in the next 3 months? How important to you is it that you use the FSC services in the next 3 months?" A 7-point scale was used and summations of the two questions were averaged. The bivariate correlation between the

two items was .81.

Repeat Service Use. Service use was retrieved from administrative data with dates and activities listed. A matrix was provided to the Centers at the conclusion of the study. The matrix included the dates of participation and the types of activities in which the person participated. This data was compared to the date of the interview to determine whether they returned at least one other time before the time of the interview and how many times they returned in a three-month period. In this study, the variable was calculated a dichotomous no/yes (0/1) for any repeat service use after the interview.

Control Variables

Age. Age was a continuous variable, based on self-report.

Non-Hispanic White. Minority status vs. Non-Hispanic White was included as control variable. Two Centers had only African American families, and the sample was predominantly African American or Non-Hispanic White, so race/ethnicity was dichotomized into Minority (0) or (Non-Hispanic) White (1).

Married/Partnership. Participants were asked to indicate if they were married, separated, single, never married, in a domestic partnership/civil union, widowed, or single, divorced. This variable was dichotomized into married/partnership (1) and all others (0), to indicate the extent to which these participants may have other support at home from a partner.

Some College. Participants were asked to indicate how much education they had in an open-ended question. This was coded as less than high school, high school or GED, some college, bachelor's degree, or master's degree. In the analysis, a dichotomized variable of at least some college (1) included some college or more. All others were

coded “0”.

Employed. Participants were asked to indicate their employment status in an open-ended question. This was coded as employed (1), regardless of full or part-time status. Unemployed and those on disability were coded “0”.

Data Analysis Plan

The purpose of this study was to test the mediating relationship of intentions between repeat service use and psychological and social motivating factors and past service use. Mediation analysis assesses the mechanism by which other factors are related, explaining how or why two variables are related (either partially or fully) by an intervening variable (Baron & Kenny, 1986; Fairchild & MacKinnon, 1999). There are several conditions that must be met in order to establish that a variable is mediating the relationship between two other variables and are performed sequentially using regression analysis. First, the independent variable must affect the mediator (intentions). Second, the independent variable must affect the dependent variable (repeat service use). Third, the mediating variable (intentions) must affect the dependent variable (repeat service use), when the independent variable is controlled. Also, the effect of the independent variable on the dependent variable must be less in the third step than the effect of the independent variable in the second step to detect partial mediation or non-significant to detect full mediation (Baron & Kenny, 1986; Fairchild & MacKinnon, 1999; MacKinnon, 2008). When full mediation is found, the effects of the independent variable on the dependent variable are entirely indirect through the mediating variable. Alternately, when partial mediation is found, the independent variable has both direct effects on the dependent variable and indirect effects through the mediating variable.

The first regression was a logistic regression predicting repeat service use with the control variables entered in step 1, the psychological and social motivating variables and past service use entered at step 2, and intentions entered in step 3. The second regression was a multivariate regression predicting intentions, with the control variables entered in step 1, the psychological and social motivating variables and past service use entered at step 2. These regressions were considered step-wise, as the order of entry was forced in groups, such that control variables were entered at the first step and motivation variables at the second step, with a theoretical rationale for the order of entry. SPSS 22 was used for all analysis.

Correlation coefficients are the most common indicator of effect size used (MacKinnon, 2008). The primary interest is the "correlation between the mediating variable and the dependent variable adjusted for the correlation between the independent variable and the dependent variable" (MacKinnon, 2008, p. 81). The direct and indirect effect of the independent variable can be calculated using the correlation coefficients. Standardized betas allow us to compare the relative contribution of variables in the model and the R-squared indicates the total amount of variance in the dependent variable the model has explained (MacKinnon, 2008).

Before a model can be tested using regression, the data must be examined for missingness, skewness, kurtosis, and multicollinearity. Preliminary analyses were performed before examining the bivariate analyses through *chi-square*, *t-test*, and Pearson's bivariate analyses, followed by examination of the multivariate relationships through logistic and multivariate regressions.

Preliminary Analysis

Center Characteristics and Response Rates

Table 1 presents characteristics of the five FSCs in the study, including region of the state, urban/rural classification, agency structure, study response rates, and frequencies for participant demographic characteristics that were included in the study and repeat service use. Four of the FSCs were from the northern half of the state and one was located in the southern half of the state. Two were in rural towns and three in urban cities. Agency structure refers to whether each agency was an independent, freestanding Family Success Center or part of a multi-service agency with other programs. One FSC was considered quasi-independent, as it did not have its own 501c3 status, but was housed separately from its parent organization and did not share resources or programs. Response rates on participation in the interview after being referred for the study were below 60%, suggesting that there may be some bias in the results (Yu & Cooper, 1983), which will be discussed further below.

Analysis of Variance (ANOVA) and *chi*-squares were performed to explore whether participant characteristics utilized in this study varied by FSCs (Table 1). These differences cannot be modeled in this study, but may provide context for understanding the findings. Regarding the demographic variables, race/ethnicity and employment were significantly different across the sites. Race/ethnicity was highly variable amongst the sites, as two had research populations that were 100% African American and one FSC had a majority (72%) non-Hispanic White population. Proportions of employed participants varied considerably, from a low of 12.5% to a high of 46.2%.

Table 1: Select Center Characteristics

Center Characteristic	1	2	3	4	5
Region	North	North	North	North	South
Density	Rural	Urban	Urban	Urban	Rural
Agency Structure	Multi-Service	Independent	Multi-Service	Quasi-Independent	Independent
Study Response Rates					
Referred	60	39	94	34	82
Interviewed	35	25	29	15	34
Response Rate	58%	64%	31%	44%	42%
Participant Demographics					
Age	33.5	35.3	38.1	32.0	38.0
Race/Ethnicity***					
African American	9.1%	65.0%	100%	100%	48.0%
Non-Hispanic White	72.7%	15.0%	-	-	32.0%
Hispanic/Latino	15.2%	5.0%	-	-	8.0%
Other	3.0%	15.0%	-	-	16.0%
Married/Partnership	27.3%	30.0%	25%	7.7%	20.0%
Some College	54.5%	45.0%	20.8%	30.8%	32.0%
Employed*	15.3%	25.0%	12.5%	46.2%	44.0%
Independent Variables					
Past Service Use***	3.42	4.15	1.71	1.00	4.16
Complex Needs***	9.1%	30.0%	70.8%	38.5%	88.0%
Expectation of Benefit*	4.14	4.24	4.17	4.27	3.74
Integrated Motivation***	4.09	4.28	3.82	4.21	3.37
Injunctive Social Norms	3.93	4.01	3.92	3.97	3.93
Descriptive Social Norms***	2.48	3.17	3.29	3.28	3.10
Family Support Practices**	4.13	4.30	4.41	4.49	3.93
Dependent Variables					
Intentions**	6.41	6.30	5.90	5.81	5.00
Repeat Service Use***	93.9%	30.0%	4.2%	53.8%	4.0%

* $p \leq .05$, ** $p < .01$, *** $p < .001$

Note: Anova conducted for continuous variables, chi-square for categorical variables.

For independent variables, significant cross-site differences were observed for all of the variables except injunctive social norms. Mean scores on past service use ranged from a low of 1.00 at one FSC, representing very little exposure to social services, to a high of 4.16 at another FSCs, on a scale that could range as high as 9. Participants were asked to describe their reason for initially coming to the FSCs and this variable was coded as ‘complex need’ if they indicated something other than just concrete assistance,

such as learning some type of skill or participating in activities for their family. Two FSCs had fairly low percentages of the study population that were interested in anything other than concrete assistance (22.0% and 29.2%). In one FSC, just over half of the participants (51.5%) indicated they were interested in other activities, while in two FSCs substantial proportions of the population (70.0% and 90.9%) were interested in other activities. Expectations of benefit mean scores ranged across the FSCs from 3.74 to 4.27, however, four of the five FSCs were close in score. Integrated motivation ranged from 3.37 to 4.28 and there was considerable variation on this variable across the FSCs. Descriptive social norms ranged from 2.48 to 3.29, also with considerable variation across the FSCs. Lastly, family support practices ranged from 3.93 to 4.49.

Regarding the mediating and dependent variables, both were significantly different across FSCs. Intentions ranged from 5.00 to 6.41 on a 7-point scale. Repeat service use varied by site with two FSCs having just around 4% repeat use, one site reaching 30%, another at almost 54% and one site achieving nearly 94% repeat rate.

Participant Demographics

Table 2 presents the descriptive statistics of the participants in the study, overall and by repeat service use. The majority of participants were female (89.6%). Participants ranged between 18 and 57 years of age with a mean age of 35.6 years. This range was distributed in 8-year increments, for the descriptive table only, in order to depict the range of ages. The most common age range was 26-33 years old. The majority of participants constituted African American (56.5%). Non-Hispanic White participants were just over 30% of the sample, with Hispanic (7%) and other race/ethnicities (3%) making up the remainder. Twenty-three percent of the participants were currently married

or in a domestic partnership. More than half of the participants (61.7%) had never attended college, and nearly 23% had not graduated from high school or completed an equivalency exam. Only 26.1% were employed either full or part-time, and 35.7% had been referred to child protective services at some point during adulthood. Housing instability was fairly common, with 37.4% having moved in the past year. Regarding receipt of concrete needs assistance, 65.2% were receiving food assistance, 54.8% were receiving government income assistance, and 20% were receiving either subsidized housing or a Section 8 voucher. Also, 21.7% were receiving child support. A number of differences were observed in the demographic data related to repeat service use and were identified for inclusion in the analysis, including age, race/ethnicity, marital status, education, and employment.

Table 2. Characteristics of Participants (n=115)

Characteristic	All	Repeat Service Use	
	%	# No	# Yes
Gender			
Female	89.6	59	44
Male	10.4	10	2
Age			
18-25	13.0	3	12
26-33	35.7	28	13
34-41	20.9	15	9
42-49	22.6	18	8
50-57	7.8	5	4
Race			
African American	56.5	51	14
Non-Hispanic White	30.4	10	25
Hispanic/Latino	7.0	2	6
Other	6.1	6	1
Married/Domestic Partnership	23.5	18	9
Education			
Less than H.S.	22.6	20	6
GED/H.S. Diploma	39.1	29	16
Some College	33.0	15	23
Bachelor's	4.3	4	1
Master's	0.9	1	0
Employment			
Employed	26.1	22	8
Unemployed	65.2	39	36
Disabled	8.7	8	2
Child Protection Referral Ever	35.7	23	18
Moved in the Past Year	37.4	24	19
Food Assistance*	65.2	45	30
Food Stamps	56.5	43	22
WIC	25.2	15	14
Housing Assistance			
Subsidized	7.0	8	0
Section 8	13.0	11	4
Government Income Assistance*	54.8	38	25
Unemployment	14.8	7	9
TANF	27.0	22	9
Disability	21.7	17	8
Child Support	21.7	13	11

*Sub-categories are not mutually exclusive. Category heading represents total percentage and number of families with at least one of the sub-types.

Missing data

Missing data was assessed for missing completely at random (MCAR) using Little's MCAR test in SPSS (Little, 1988). Missing data could be single items missing on scales, entire scales being missed, or subjects missing from the entire wave. Data could

be missing completely at random (MCAR), missing at random (MAR), and not missing at random. Missing items on scales is not a serious problem – affecting generalizability -- as long as it is at least missing at random (MAR) (Rubin & Babbie, 2008). A variable that is not missing at random suggests that there is something different about those that responded to the question from those that did not respond. Four variables – integrated motivation, family support practices, injunctive social norms, and descriptive social norms -- had missing values and with the exception of one question that had 2.6% missing values, the rest of the questions had 1.7% missing data or less. The Little's MCAR test statistics indicated that the data were missing completely at random ($\chi^2 = 657.943$, $DF = 638$, $p = .284$), indicating that missing data replacement would be acceptable. There are multiple ways to impute the data when missing at random. This is tenuous and based on assumption, not the data. Two common methods include mean substitutions and linear predictions, but both have limitations. Mean substitution may corrupt marginal distributions and linear predictions distort correlations. Both lead to low standard errors and spurious significance (Fraser, 2004). However, Tabachnick and Fidell (2007) noted that when the missing amount of data is small, there is little difference in imputation method.

Series mean replacement was utilized with missing data. Multiple imputation (MI) was considered; as it is often considered superior to other replacement techniques. MI is one of the most popular methods for data replacement (Rubin, 1987), which involves replacing missing data by randomly drawing from their respective predictive distributions (Yucel & Demirtas, 2010) and is considered appropriate even if the missing data are nonrandom and greater than 10% of the dataset (Pastor, 2003). Both series mean

replacement and MI was performed for this study during preliminary analysis and the results compared. Series mean replacement was observed to provide very similar results and there appeared to be no benefit of using the more complex multiple imputation data.

Models tested through regression should be parsimonious and the potential for multicollinearity assessed by examining tolerance and VIF statistics in a multivariate regression analysis (Orme & Combs-Orme, 2009). A tolerance value below .10 and a VIF value above 10 indicate are considered problematic. However, multicollinearity in multiple regression is, to some degree, to be expected (Grimm & Yarnold, 1995). It may not always be appropriate to eliminate variables of interest that are conceptually distinct due to high correlations with other predictors alone. Multiple regression controls for the correlation between predictors and using only variables that are uncorrelated eliminates the primary use for multiple regression (Grimm & Yarnold, 1995). Additionally, when conducting multivariate regression analysis, skewness greater than 3.0, kurtosis greater than 10, and low standard deviations may indicate normality problems with the data (Kline, 1998). Pearson's skewness coefficient or Fisher's measure of skewness are commonly computed and a histogram to visually represent the data is inspected (Munro, 2005).

The self-efficacy variable was eliminated from the analyses due to problems with multi-collinearity. Self-efficacy was a combination of a ten-item scale and four specific questions related to the context. Analyses were conducted to determine whether those four questions constituted a second factor or, alternately, whether there was sufficient support for a single dimension. Self-efficacy had a reliability statistic of .83, although the elimination of one question of the four related to context would raise it to .84. Factor

analysis was conducted and the four added questions did suggest a second factor, with scores ranging between .51 and .65. Preliminary analysis was conducted with a ten-question version and separate analysis was performed with a fourteen-question version. In both analyses, self-efficacy had a tolerance value below .10 and a VIF value above 10 when regressed against repeat service use in a continuous version performed to examine multicollinearity (Orme & Combs-Orme, 2009). The fourteen-question version was also included in preliminary analysis of the logistic regression, which yielded a significant Wald statistic, so the variable of self-efficacy was not retained for the final analysis.

Table 3: Descriptive Statistics of Study Variables

Variable	M/SD	%	Range	Skewness	Kurtosis	Reliability α
Demographics						
Age	35.6/9.8		18-57	.27	-.74	
Non-Hispanic White		30.4	0-1	.86	-1/28	
Married/Partnership		23.0	0-1	1.27	-.40	
Some College		38.2	0-1	.49	-1.79	
Employed		26.1	0-1	1.10	-.80	
Independent Variables						
Past Service Use	3.08/2.50		0-9.00	.34	-1.00	
Complex Needs		53.9	0-1	-.16	-2.01	
Expectation of Benefit	4.09/0.61		2.17-5.00	-.41	-.06	.74
Integrated Motivation	3.92/0.84		2.00-5.00	-.57	-.48	.70
Injunctive Social Norms	4.20/0.70		2.00-5.00	-.37	.17	.70
Descriptive Social Norms	3.10/1.02		1.33-5.00	-1.11	-1.84	.86
Family Support Practices	4.21/0.54		2.88-5.00	-1.84	-.46	.93
Dependent Variables						
Intentions	5.91/1.50		1.00-7.00	-1.66	2.55	.89
Repeat Service Use		40.0	0-1	.01	-1.86	

Descriptive statistics (means, standard deviations, frequencies, range, skewness, kurtosis, and Cronbach's alpha reliability) for all variables retained for regression analysis are presented in Table 3. The continuous version of the dependent variable return service usage had a kurtosis score of 10.68 and skewness of 3.07. Further, 60% of participants did not return after the interview. This variable was dichotomized into repeat, yes or no. The other variables were within acceptable ranges and graphing of the data

indicated reasonable distribution.

There were three variables that had wording that specifically identified motives for service use within the context of a “problem.” It became clear as data collection progressed that some participants presented for services in order to engage in personal development and did not identify with this problem-oriented language. These variables were assessed to determine whether elimination of those questions, in particular, would improve reliability scores. Injunctive norms had two questions with problem-oriented language and the reliability statistic was low (.46). Removing these two questions raised the alpha to .70. Descriptive social norms had one question that was problem-oriented and removing it raised the Cronbach’s alpha from .77 to .86. In both cases, elimination of the problem-oriented language notably improved the reliability statistics and was intuitively appealing in order to be congruent with service perspective under examination. In addition, exploratory factor analysis was conducted on the family support practices measure. Problem-oriented language loaded onto two factors, one negatively worded (ex. “Blames me for my family’s problems”) and the other representing experiences that occur in a more therapeutic environment where decisions might be made about treatment for family members (ex. “Understands I know my children better than anyone else does”). As many families came to the Centers for reasons that might not be considered problems and problem-oriented language reduced alphas in two other scales, these seven questions were removed from the family support practices scale, even though their elimination did not change the reliability score ($\alpha = .93$).

Further, some of the participants in the study (36.5%) returned to a Center before we were able to schedule them for an initial interview. Of these, nine did not return after

our interview. A regression model was performed predicting repeat service use after the interview with a dichotomous variable of those that returned before the interview.

However, all but one of the variables found to be predictive in the final model were non-significant with the addition of this variable and analysis of bivariate correlations revealed that this variable closely paralleled the relationship of repeat service use to the significant predictor variables. It was decided to leave this control variable out of subsequent analysis.

Power Analysis

In addition to meeting assumptions for regression, the data must have sufficient statistical power. This reduces the chance of making a Type II error and accepting the null hypothesis when it is in fact false. It is related to the size of the effect expected, the significance level chosen, the type of statistical procedure conducted, and the number of variables in the analysis (Rubin & Babbie, 2008). Effect sizes in human services are often fairly low (.10) (Rubin & Babbie, 2008). For regression, it is generally recommended that sample sizes be ideally 20 times larger than the number of parameters (Kline, 1998). A power calculation computed on a statistics power calculation website (<http://danielsoper.com/statcalc3/calc.aspx>) for multiple regression indicated that with a desired probability level of .05 or less, as well as 13 variables, 111 participants would provide a power level of .8 with an anticipated effect size of .18. Therefore, it is possible that smaller effect sizes would not be detectible. Bootstrapping (Efron, 1982) was utilized as a resampling method, which generates datasets similar to the original and is considered suitable for regression (Efron & Tibshirani, 1986; Ferro & Speechley, 2013).

CHAPTER 4

RESULTS

Analysis of the Research Questions

Q1: Predicting Repeat Service Use

The first research question – “To what extent are the relationships between psychological, social, and intervention-related motivating factors, as well as past service use, related to repeat service use?” – was explored by examining bivariate *t*-tests and *chi*-square analyses, followed by logistic regression to examine multivariate relationships. It was hypothesized that past service use, perceived need (i.e. complex needs), higher expectations of benefit, integrated motivation, injunctive social norms, descriptive social norms, and family support practices would be related to return service usage. The results indicate partial support for the hypothesis.

Bivariate Analysis. Table 4 presents the results of the bivariate analyses examining the relationships between the independent variables and repeat service use. Three variables were significantly associated with repeat service use in the bivariate analysis. Of the psychological factors, parents that identified complex needs were more likely to return than those that identified concrete needs only. In fact, just 17 % of those that came in for concrete needs only returned to a FSC compared to 60% that came in for complex needs. Also, integrated motivation was associated with repeat service use ($t = 4.02, p < .001$). The mean score for those that returned to an FSC was 4.22, whereas those that did not return had a mean score of 3.75 on a five-point Likert-type scale.

Table 4: Bivariate Analysis for Theoretical and Select Demographic Variables with Service Use (n=115)

	<i>No Repeat (n=69)</i>	<i>Repeat (n=46)</i>	<i>Statistic</i>
<i>Variable (Categorical)</i>	<i>N (%)</i>	<i>N (%)</i>	<i>χ^2</i>
Race/Ethnicity			20.71***
Minority	59 (73.8)	21 (26.3)	
Non-Hispanic White	10 (28.6)	25 (71.4)	
Marital Status			.65
Not Married/Partnership	51 (58.0)	37 (42.0)	
Married/Partnership	18 (66.7)	9 (33.3)	
Education			6.28*
Less than College	49 (69.0)	22 (31.0)	
Some College	20 (45.5)	24 (54.5)	
Employed			3.01
Not Employed	47 (55.3)	38 (44.7)	
Employed	22 (73.3)	8 (26.7)	
Perceived Need			21.70***
Concrete Needs Only	44 (83.0)	9 (17.0)	
Complex Needs	25 (40.3)	37 (59.7)	
<i>Variable (Continuous)</i>	<i>Mean (SD)</i>	<i>Mean (SD)</i>	<i>t</i>
Age	36.72 (8.94)	35.12 (10.44)	-.86
Past Service Use	3.03 (2.60)	3.12 (2.41)	.18
Expectation of Benefit	4.03 (.64)	4.22 (.54)	1.59
Integrated Motivation	3.75 (.91)	4.29 (.53)	4.02***
Injunctive Social Norms	3.92 (.55)	4.06 (.54)	1.32
Descriptive Social Norms	3.22 (.76)	2.64 (.95)	-3.36**
Family Support Practices	4.19 (.55)	4.29 (.50)	.95
Intentions	5.60 (1.73)	6.42 (.94)	3.22**

* $p \leq .05$, ** $p < .01$, *** $p < .001$

Of the social factors, descriptive social norms had a negative relationship to repeat service use ($t = -3.36, p < .01$). Another words, parents with higher perceptions that their social networks use similar types of services were less likely to return than those with lower perceptions. The mean score for parents that returned was 2.64 on a five-point Likert-type scale, as opposed to 3.22 for those that did not return. Factors that were not found to be significantly associated with repeat service use at the bivariate level included past service use, expectations of benefit, perceptions that social networks were supportive of service use, or ratings of family support practices.

Compared with minority group parents, non-minority parents were more likely to repeat service use ($\chi^2 = 20.71, p < .001$). Educational attainment was also related to repeat service use. Parents with a high school diploma or less education were less likely to return than parents with some college ($\chi^2 = 6.28, p \leq .05$). The difference is more pronounced for those without any college education, as less than half of those parents returned. None of the other demographic variables were significant in the bivariate analysis predicting repeat service use.

Logistic Regression. Table 5 presents the results of a logistic regression analysis with key demographic variables - age, non-Hispanic White, married/partnership, some college, and employed - entered in Step 1 and theoretically-based variables - past service use, complex needs, expectations of benefit, integrated social norms, injunctive and descriptive social norms, and family support practices - entered at Step 2 predicting repeat service use.

In Step 1, the demographic variables of age, non-Hispanic/White and at least some college were significantly related to a higher likelihood of repeating. Specifically, for each additional year in age, the odds of returning for services were reduced 5%. Relative to minority participants, non-Hispanic White participants were 9.08 times more likely to return. Also, having some college education increased the odds of repeating 3.35 times over the likelihood for participants without any college education. Minority status had the largest effect size for the demographic variables, followed by education and age. The latter had a very small effect on repeat service use. This model predicted between 26.4 (Cox & Snell) and 35.6 (Nagelkerke) percent of the variance in repeat service use,

($\chi^2 = 35.18$, $df = 5$, $p < .001$). The Hosmer and Lemeshow test was non-significant, indicating goodness of fit, and 73% of the data was correctly classified.

Table 5: Summary of Step-wise Logistic Regression Analysis for Variables Predicting Repeat Service Use (n=115)

<i>Variable</i>	<i>B</i>	<i>SE B</i>	<i>Wald</i>	<i>Odds Ratio</i>	<i>CI</i>	
					<i>Lower</i>	<i>Upper</i>
Step 1						
Age	-.06	.03	4.99	.95*	.90	.99
Non-Hispanic White	2.21	.52	17.93	9.08***	3.27	25.21
Married/Partnership	-.93	.57	2.66	.39	.13	1.21
Some College	1.21	.47	6.66	3.35**	1.34	8.37
Employed	-.39	.53	.53	.68	.24	1.93
Step 2						
Age	-.05	.03	3.36	.95	.90	1.00
Non-Hispanic White	2.21	.74	9.03	9.11**	2.16	38.47
Married/Partnership	-1.28	.71	3.19	.28	.07	1.13
Some College	1.55	.68	6.10	4.71*	1.38	16.10
Employed	-.27	.64	.17	.77	.22	2.68
Past Service Use	-.07	.12	.39	.93	.74	1.17
Complex Needs	1.85	.60	9.45	6.36**	1.96	20.67
Expectation of Benefit	-.30	.67	.20	.74	.20	2.78
Integrated Motivation	1.02	.50	4.13	2.77**	1.04	7.40
Injunctive Social Norms	-.55	.57	.93	.58	.19	1.77
Descriptive Social Norms	-.89	.37	5.67	.41*	.20	.86
Family Support Practices	.87	.71	1.51	2.38	.60	9.46

* $p \leq .05$, ** $p < .01$, *** $p < .001$

Step 1: Likelihood = 119.61, $\chi^2 = 35.18$, $R^2 = 26.4/35.6\%$

Step 2: Likelihood = 85.87, $\chi^2 = 68.93$, $R^2 = 45.1/60.9\%$

When the second set of characteristics were added to the model in Step 2, age was no longer a significant predictor of repeat service use. Minority status and education remained significant and the effect sizes went up slightly for each. As predicted, respondents that identified complex needs were 6.36 times more likely to return than respondents that requested assistance with basic needs only. A one-unit increase in integrated motivation increased the odds of repeating service use by 2.77 times. And finally, a one-unit increase in descriptive social norms decreased the odds of repeat service use by 59%. In other words, perception that the participant's social networks had participated in family support programs was negatively related to repeat service use. This

model predicted between 45.1 (Cox & Snell) and 60.9 (Nagelkerke) percent of the variance in repeat service use, ($\chi^2 = 68.93$, $df = 12$, $p < .001$). The Hosmer and Lemeshow test was non-significant, indicating goodness of fit, and 83.5% of the data were correctly classified.

All of the variables that were significantly associated with repeat use in the bivariate analysis remained significantly associated in the multivariate analysis with one exception: age. The relationship between age and repeat use was non-significant when the psychological and social variables were entered, suggesting that it was a spurious relationship or mediated by other social-psychological variables. Of the variables hypothesized to be positively related to repeat service use, past service use, expectations of benefit, injunctive social norms, and family support practices were not significantly associated and descriptive social norms were negatively related. Only identification of complex needs and levels of integrated motivation were positively associated with repeat use in the manner that was hypothesized.

Q2: Predicting Intentions

The second research question – “To what extent are psychological, social, and intervention-related motivating factors, as well as past service use related to intentions?” – was explored by examining bivariate correlations and multivariate regression. It was hypothesized that past service use, perceived need (i.e. complex needs), expectations of benefit, self-efficacy, integrated motivation, injunctive and descriptive social norms, and family support practices will be related to stronger intentions. The results indicate partial support for the hypothesis.

Bivariate Analysis. To examine the bivariate relationships, a Pearson's correlation table was constructed (Table 6). In this analysis, only one demographic variable was related to intentions. Employment ($r = -.29, p < .01$) had a moderate, negative relationship to intentions, such that those that were employed rated their intentions to return lower than those that were unemployed or disabled. Of the psychological variables hypothesized to be related to intentions, complex needs, expectation of benefit, and integrated motivation were positively related to intentions. Integrated motivation ($r = .59, p < .001$) and expectations of benefit ($r = .52, p < .001$) had large effects on intentions (see Cohen, 1998 for effect size calculations). Complex needs ($r = .21, p \leq .05$) had more moderate effects. Of the social variables hypothesized to be related to intentions, only injunctive social norms ($r = .36, p < .001$) was a significant predictor, falling in the medium effect size range. The intervention-based characteristic (i.e. family ratings of family support practices) was also strongly related to intentions ($r = .47, p < .001$).

Significant correlations were also observed amongst the demographic and independent variables. Expectations of benefit and integrated motivation were related to most other variables (5), followed by injunctive social norms, descriptive social norms, and family support practices each related to four variables. Complex needs was related to three other variables and past service use to two variables. However, past service use is the only independent variable was not related to other independent variables, only demographic variables.

Table 6: Bivariate Correlations for Theoretical and Select Demographic Variables with Intentions (n=115)

	1	2	3	4	5	6	7	8	9	10	11	12
1. Age	-											
2. Non-Hispanic White	.06	-										
3. Married/Partnership	.01	.12	-									
4. Some College	.10	.10	.11	-								
5. Employed	-.01	-.18	.09	-.06	-							
6. Past Service Use	.10	.20*	-.20*	-.06	-.18	-						
7. Complex Needs	-.12	.16	.06	.23*	-.17	-.06	-					
8. Expectation of Benefit	.04	.03	.04	-.03	-.11	-.14	.19*	-				
9. Integrated Motivation	.04	.17	-.02	-.09	-.14	.03	.24**	.61***	-			
10. Injunctive Social Norms	.09	.03	-.05	.04	-.06	.07	.13	.52***	.44***	-		
11. Descriptive Social Norms	-.03	-.33**	.03	-.08	.00	.02	-.05	.15	.21*	.24**	-	
12. Family Support Practices	.03	-.10	-.12	-.02	.01	-.08	.01	.47***	.49***	.41***	.30**	-
13. Intentions	-.09	.18	-.02	.05	-.29**	.06	.21*	.52***	.59***	.36***	.14	.47***

*p ≤ .05, **p < .01, ***p < .001

Step-wise Multivariate Regression. A step-wise multivariate regression was performed (Table 7) with key demographic variables - age, non-Hispanic White, married/partnership, some college, and employed - entered in Step 1 and theoretically-based variables - past service use, perceived need (i.e. complex needs), expectations of benefit, integrated social norms, injunctive and descriptive social norms, and family support practices - entered at Step 2.

Table 7: Summary of Step-wise Multivariate Regression Analysis for Variables Predicting Intentions (n=115)

<i>Variable</i>	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>CI</i>	
					<i>Lower</i>	<i>Upper</i>
Step 1						
Age	-.02	.01	-.11	-1.19	-.04	.01
Non-Hispanic White	.44	.30	.14	1.5	-.15	1.04
Married/Partnership	-.04	.32	-.01	-.11	-.68	.61
Some College	.10	.28	.03	.37	-.46	.66
Employed	-.90	.31	-.26**	-2.86	-1.5	-.28
Step 2						
Age	-.02	.01	-.14*	-1.98	-.04	.00
Non-Hispanic White	.29	.26	.09	1.11	-.23	.82
Married/Partnership	.10	.26	.03	.38	-.42	.62
Some College	.24	.23	.08	1.05	-.21	.69
Employed	-.66	.25	-.19**	-2.63	-1.16	-.16
Past Service Use	.04	.05	.07	.95	-.05	.13
Complex Needs	.06	.23	.02	.25	-.40	.52
Expectation of Benefit	.46	.24	.19	1.88	-.03	.94
Integrated Motivation	.56	.18	.31**	3.13	.20	.91
Injunctive Social Norms	.06	.18	.03	.30	-.31	.42
Descriptive Social Norms	.00	.12	.00	.02	-.23	.24
Family Support Practices	.68	.25	.25**	2.78	.20	1.17

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

Step 1: $R^2 = 11.3\%$, $R^2 \text{ Change} = 11.3\%$

Step 2: $R^2 = 50.4\%$, $R^2 \text{ Change} = 39.1\%$

With respect to demographics entered in Step 1, employment ($\beta = -.26$, $p < .01$) remained the only factor statistically significantly associated with intentions. That is, being employed was negatively related to intentions. In contrast to the findings for actual repeat service use, race/ethnicity, education, and age were not associated with the expressed intentions to return. This model accounted for 11.3% of the variance in intentions $F(5,109) = 2.78$, $p = .021$.

In Step 2, age ($\beta = -.14, p \leq .05$) was significantly associated with intentions, with older respondents being less likely to express return intentions. In contrast, age was not significant in the bivariate analysis for either intentions or repeat service use, but similarly emerged as statistically significant in one step of the logistic regression predicting repeat service use, suggesting a suppression effect. As was the case in the bivariate analysis and Step 1 of the multivariate analysis, employment ($\beta = -.19, p < .01$) remained negatively related to intentions.

With respect to psychological characteristics, integrated motivation ($\beta = .31, p < .01$) was positively related to intentions. That is, those respondents who more strongly endorsed integrated motivation to receive services were significantly more likely to express the intention to return to the FSC. This was congruent with both the bivariate analysis predicting intentions and the multivariate analysis predicting repeat service use. Expressing complex needs was not significant in the multivariate analysis, in contrast to the bivariate analysis and the analysis predicting repeat service use. Further, expectations of benefit were not significant in the multivariate analysis, in comparison to the bivariate analysis.

In regards to social motivating factors, endorsement of injunctive social norms was not significantly related to intentions in the multivariate analysis, although it was significant in the bivariate analysis. Endorsement of descriptive social norms was not significantly related to intentions in either analysis. The variables assessing perceived social norms performed differently in the analysis of intentions than they did in the analysis of repeat service. In repeat service use, endorsing injunctive social norms was

not a significant predictor, but endorsing descriptive social norms were negatively related to repeat service use.

In regards to the interaction with the intervention, stronger perceptions of family support practices ($\beta = .25, p < .01$), which are strengths-based practices, were related to intentions in the multivariate analysis. This was congruent with the bivariate analysis. In contrast, family support practices were not related to repeat service use.

This model accounted for 50.4% of the variance in intention $F(12,102) = 8.65, p < .001$. In summary, age and employment were negatively related and levels of integrated motivation and family support practices were positively related to intentions. This indicates partial support for the hypothesis, as other variables – extent of past service use, complex needs, level of expectation of benefit, and endorsement of injunctive and descriptive social norms -- were not significantly related to intentions. Three variables were significant in the bivariate and not in the multivariate: complex needs, injunctive social norms, and expectations of benefit. The effect sizes for complex needs and injunctive social norms in the bivariate analysis were modest. However, expectations of benefit had a large effect size in the bivariate analysis. The effect sizes for the other variables in the multivariate analysis were generally smaller than in the bivariate analysis, but remained similar relative to each other.

Q3: Mediating Role of Intentions

The third research question – “To what extent are the relationships between repeat service use and psychological, social, and intervention-related motivating factors, as well as past service use, mediated by intentions? – was explored by adding intentions as Step 3 in the logistic regression previously presented predicting repeat service use (Table 5). It

was hypothesized that intentions to return to the FSC would mediate between repeat service use and the predictor variables of the extent of past service use, type of perceived need, expectations of benefit, degree of self-efficacy, level of integrated motivation, endorsement of injunctive and descriptive social norms, and perceptions of family support practices. This hypothesis was unsupported by the analysis.

Table 8: Summary of Step-wise Logistic Regression Analysis for Variables Predicting Repeat Service Use (n=115)

<i>Variable</i>	<i>B</i>	<i>SE B</i>	<i>Wald</i>	<i>Odds Ratio</i>	<i>CI</i>	
					<i>Lower</i>	<i>Upper</i>
Step 3						
Age	-.05	.03	2.73	.95	.90	1.01
Non-Hispanic White	2.32	.75	9.47	10.14**	2.32	44.37
Married/Partnership	-1.56	.78	4.00	.21*	.05	.97
Some College	1.90	.71	7.19	6.69**	1.67	26.83
Employed	.08	.68	.02	1.09	.29	4.07
Past Service Use	-.10	.12	.75	.90	.71	1.14
Complex Needs	2.00	.63	10.13	7.41**	2.16	25.45
Expectation of Benefit	-.65	.71	.82	.52	.13	2.12
Integrated Motivation	1.07	.54	3.89	2.90*	1.01	8.38
Injunctive Social Norms	-.78	.62	1.61	.46	.14	1.53
Descriptive Social Norms	-.97	.38	6.51	.38**	.18	.80
Family Support Practices	.65	.72	.82	1.91	.47	7.81
Intentions	.67	.38	3.02	1.95	.92	4.12

* $p \leq .05$, ** $p < .01$, *** $p < .001$

Step 3: Likelihood = 82.41, $X^2 = 72.38$, $R^2 = 46.7/63.1\%$

Logistic Regression. In the bivariate analysis (Table 4), expressed intention to return was positively related to service use ($t = 3.22$, $p < .01$), such that those that returned had a mean score of 6.42 on a seven-point Likert-type scale, as opposed to a mean score of 5.60 for those that did not return. However, in the logistic regression -- Step 3 of the previous logistic regression -- intentions was not a statistically significant predictor (Table 8). However, the addition of intentions did alter the other variables somewhat, causing the effect sizes for all of the significant variables -- racial/ethnic minority status, education, complex needs, integrated motivation, and descriptive social norms -- to increase. Further, marital status became a significant predictor in Step 3, such

that married participants were 79% less likely to repeat service use. This suggests a suppression effect. However, as the residual variance is fixed in logistic regression, nested models can be misleading (Williams, 2009). Based on Williams (2009), an OLS regression was performed to test the stability of the suppression effect (i.e. it is replicated in the OLS regression) and while the effect size increase was smaller, it was still detectable in all of the previously noted variables. The logistic regression model predicted between 46.7 (Cox & Snell) and 63.1 (Nagelkerke) percent of the variance in repeat service use, and had an acceptable goodness of fit based on a number of statistics: $\chi^2 = 72.38$, $df = 13$, $p < .001$, as well as a non-significant Hosmer and Lemeshow test and correct classification of 86.1% of the data. Therefore, while expressed intention to return was not a significant predictor, the inclusion of this variable improved the overall model and our understanding of the predictor variables. However, the hypothesis that expressed intentions to return would mediate the relationship between the individual-level motivating variables and repeat service use was not supported.

CHAPTER 5

DISCUSSION

Introduction

The purpose of this study was to examine the factors associated with repeat service use in a primary child maltreatment prevention and family support program. The FSCs are neighborhood centers that are intended to reduce the risk of child maltreatment by promoting protective factors. The FSCs provide a range of services and activities to families, tailored to the requests of the individual and collective participants. This is in contrast to manualized services, where each participant theoretically receives the same service. Further, the program model endorses a particular philosophical approach, known as family support (Chin, 2008; New Jersey Task Force on Child Abuse and Neglect, 2014). A review of prior research identified health behavior theories and models relevant to understanding repeat service use in primary child maltreatment prevention/family support services, but no theory-based studies of this type of service model were located.

A review of health behavior theories identified key psychological and social motivating factors and relevant theoretical processes. In particular, complex needs, self-efficacy regarding problem solving, expectations of the benefit of the service in relation to the costs of service involvement, integrated motivation (i.e. having an internal reason for services), a perception that social networks think favorably about social service use, a perception that important social networks use social services, and perceptions regarding family support practices are theorized to be motivating factors that should have a positive relationship to repeat service use. Further, the theory review suggested that motivating factors achieve their effect on service use by strengthening the individual's cognitive

intention to participate in services. In this sense, intentions are thought to act as a mediator of the relationship between the motivating factors and repeat service usage.

The results of this study have a number of implications for policy, practice, and future research. This section will begin with a discussion of the findings, followed by the implications and limitations of the research.

Findings

Prior research predicting voluntary social service use in prevention programs equivocated on the significance of the theoretically-based variables in predicting service use, but generally agreed upon the direction of the relationships and the importance of the factors identified in understanding service use. Therefore, it was hypothesized that past service use, perceived need, higher expectations of benefit, integrated motivation, injunctive social norms, descriptive social norms, and family support practices would be related to repeat service use. Further, it was hypothesized that these relationships would be mediated by intentions. These hypotheses were tested using a three-stage process whereby the independent variables are regressed on the dependent variable, then the mediating variable, and lastly the independent variables and mediating variable are regressed on the dependent variable.

Figure 6 depicts the relationships from all three stages of the multivariate analyses. The independent constructs chosen for this study could be classified as psychological, social, or intervention related. However, all are measured from the perspective of the individual participant.

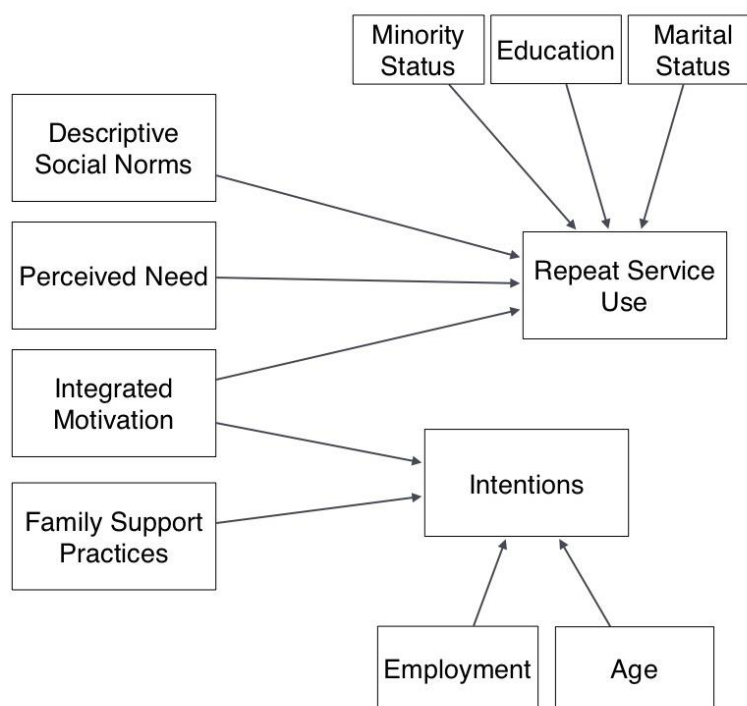


Figure 8. Model depicting significant relationships in this study, including theoretical and demographic variables.

Psychological-based Motivators

Desiring services offered at the center beyond just concrete assistance (perceived need) and perceiving that participating is connected to personally held goals (integrated motivation) were psychological factors that were associated with repeat service use, while expectation of benefit did not even have a bivariate relationship to repeat service use. Of these, only integrated motivation had a relationship to intentions in the multivariate analysis.

It is not surprising that parents identifying complex needs would be more likely to return than those that identified only concrete needs. Those categorized as requesting complex needs for this variable might have been asking for personal development related services only or in conjunction with concrete services. Some of these families might

receive something directly from the FSC, such as donated clothing or food, but their ability to directly address concrete needs is limited. The FSCs are not funded to provide any type of cash assistance to families and their role is to provide linkages to other service providers to meet this particular protective factor (Department of Children and Families, 2011). Families identifying only concrete needs may be different in some ways from families that also or exclusively expressed an interest in activities to promote other protective factors, referred to in this dissertation as complex needs. It is possible that the concrete needs-only parents are in deeper crisis, have a more limited view of the role of social services in their lives, or are reluctant to get involved in services that could be intrusive. Parents likely to return have an interest in participating in the activities of the FSCs, such as family activities, parenting workshops, or job skills training. This represents a match between the longer-term services offered at the FSC and the desires of the parent. Interestingly, while complex needs was related to intentions in the bivariate analysis, it was not in the multivariate analysis, which is likely related to co-variant integrated motivation.

Specifically, integrated motivation reflects congruence with personally held goals, which is likely a relevant concept for all participants of social services. Therefore, those who came to an FSC for concrete needs only may have been reacting to external pressure caused by an emergency or developing crisis. The relationship of integrated motivation to service use was consistent with a previous study (Wild, Cunningham, & Ryan, 2006) that found that intrinsically oriented motivation was related to engagement in substance abuse treatment. Locus of motivation has also repeatedly demonstrated a relationship to health behaviors and goal-oriented learning behavior (Deci, Vallerand, Pelletier, & Ryan, 1991).

Social-based Motivators

Endorsement of descriptive social norms (the degree to which participants perceived that others in their social network used social services) was negatively related to repeat service use and this was in the opposite direction than was expected. That is, believing that others used social services was associated with a lower likelihood of returning to the FSC for services after the first visit. Since this finding was contrary to the hypothesized expectation, explanation is needed. The descriptive social norms variable consisted of four questions, including whether their social networks had used services like those at the FSC, parenting classes or other kinds of family support, and two general questions about using social service programs. One possibility is that those who scored higher on the scale may have had social ties that were themselves connected to social services and knowledgeable, giving more options for support and representing a source of competition to the FSCs. Conversely, those that scored lower on the scale may have had fewer other options and appreciated the novel support. Taken together, this would have resulted in contradictory findings for this scale. However, this is speculation, as endorsement of descriptive social norms has not been included in analogous research.

If descriptive social norms indeed represent competing informal social support, this may suggest that the FSCs meet a need for those that don't have this support or knowledge in their social networks. This seems further likely with the finding that this service seemed to appeal particularly to single parents. Further, descriptive social norms were not related to intentions, suggesting that this information may become more salient at a later decision point, such as when a person must try to fit the center activities into their schedule and decide whether it is truly worth the effort. Further, parents would need

to know this information about their social networks, when this might not be the kind of information that is readily shared or apparent. The mean for the scale was very close to the mid-point response. Some parents stated during the interviews that they didn't know whether their social networks engaged in this behavior and chose the neutral response, which may affect the reliability of these findings as well.

Endorsement of injunctive social norms – a standard conceptualization of social support for behavior – were not related to repeat use and were only related to intentions in the bivariate analysis. It is possible that injunctive social norms are relevant when deciding whether to enter the doors of the service provider, but are less relevant when deciding whether to stay. However, this is contrary to the model proposed by McCurdy & Daro (2001). Differential effects of injunctive and descriptive social norms have previously been observed (e.g. White et al., 2009).

Intervention-based Motivators

One of the central concerns of this study was to examine the assumption that the family support approach – a central feature of the FSCs -- would result in increased service engagement. While individual-level perceptions of qualities that represent a family support approach did relate positively to intentions, it did not have direct or indirect effects on repeat service use. Family support practice was included based on findings in a previous study that found that perceptions of the home visitor were related to intentions (McCurdy et al., 2006) and other research suggesting that attributes of the service environment are important to families (Dunst, Trivette, & Deal, 1994; Green, McAllister, & Tarte, 2004).

Mediating Motivator

It was hypothesized that stated intentions would have a partial mediating role between the psychological and social motivating factors and return service use. Intention to return was significant in the bivariate analysis, but not in the multivariate analysis in this study, which is consistent with the findings of McCurdy and Colleagues (2006). Also, Dumas and Colleagues (2007) found that intentions predicted an earlier step in the enrollment process, but not attendance. However, when intentions were added to the model the effect sizes of the other variables increased, which is known as a suppressor effect. When a suppressor effect is associated with a mediating variable, the mediation is inconsistent, also known as negative confounding (MacKinnon, Krull, & Lockwood, 2000). This occurs when the direct and indirect effects of an independent variable on the dependent variable are in opposite directions (MacKinnon, Krull, & Lockwood, 2000). One variable in the model did appear to have both negative and positive effects in the model. Descriptive social norms had a direct negative effect on repeat service use, but positive relationship with another variable (family support practices) that in turn had a positive relationship to intentions. However, an exogenous variable to the model could also explain inconsistent mediation. Considerable differences were observed between the centers, which is a more likely explanation for the inconsistent mediation. In addition to variation between participants on key variables in this study (Table 1), centers were observed to vary in terms of their enrollment and engagement processes, as well as the specific workshops that they offered, physical facilities, technology, and ability to offer additional services beyond the core requirements. Center variation could not be modeled in this study.

Other Personal Characteristics

Past Behavior. Extent of past service use had no relationship to repeat use or intentions. Past service use was included based on previous research that suggested that people are likely to repeat past behavior (McCurdy & Daro, 2001; Skar, Sniethotta, Aruajo-Soares, & Molloy, 2008). However, the fairly novel service approach of the FSCs may reduce the salience of this concept (see Weinstein, 2007).

Demographics. Parents that were non-Hispanic White, had some college, and were single were more likely to repeat service use, while those that were younger or unemployed had higher intentions to return. The finding that non-Hispanic White parents were more likely to return was in contrast to previous studies that have found minority group parents more likely to participate (i.e. Daro et al., 2003; McCurdy, 2006). The findings in this study may be somewhat related to center effects, which unfortunately could not be modeled, as FSCs with exceptionally high repeat service use served predominantly non-Hispanic White parents. However, the inability to include non-English speaking Hispanic families at the FSCs may also have contributed to this finding. According to focus groups with four FSCs and a survey of with 39 of 52 directors, Hispanic families are a large and growing proportion of the service population in a number of the FSCs and are observed to have strong engagement with the FSCs (Ocasio, 2013). Still, the majority of African-Americans did not repeat service use, suggesting that this population is not being engaged in longer-term services by the other FSCs where they make up a proportion of the population.

Parents with some college education were more likely to repeat service use. According to Dumas and Colleagues (2007), education equivocates in studies of service

use. Having at least some college was related to identifying complex needs in the bivariate analysis which may indicate a greater capacity for longer-term goal setting. However, both remained significant in the multivariate analysis, indicating independent effects. This may suggest that college education further develops a schema regarding what the person can achieve through these activities.

Also, the demographic characteristics of age and employment were negatively related to intentions. Another words, younger parents and unemployed parents had higher intentions to use services. Prior research suggested that these characteristics are not typically significant predictors of intention (Christian & Abrams, 2003; Dumas, Nissley-Tsiopinis, & Moreland, 2007; McCurdy, et al., 2006). Younger parents may have felt a higher degree of need for support, while unemployed parents may also have had higher need and more time to participate.

Recommendations

Child Maltreatment Prevention/Family Support Practice

Four concerns emerged from the findings that have implications for practice related to the FSCs. First, those that perceived their needs as limited to concrete needs-only had lower intentions to return and lower repeat use. Based on the site director survey of FSC implementation previously discussed, some of these families may have been in crisis, while others were looking for some help to alleviate a long-term burden (Ocasio, 2013). Further, some directors expressed difficulty with engaging families in crisis in the other activities of the FSC and in longer-term planning activities (Ocasio, 2013). These families might have a more limited perspective of what they could achieve with the FSCs. However, they could also be frustrated from their interactions with concrete

services (see Dupper & Poertner, 1997). Families in poverty are at heightened risk for child abuse and neglect (Drake & Pandey, 1996; Sedlak et al., 2010), but small increases in income has demonstrated a reduction in risk (Cancian, Slack, & Yang, 2010).

Reducing barriers to receiving concrete assistance could improve repeat use for these families. It is logical that families in crisis will not be able to focus on long-term goals without first addressing the crisis. Further, results of a qualitative study criminal offenders with mental health problem and reentry program staff that served them suggests that providing concrete assistance motivates participants to engage in other service components either to maintain the relationship and receive support in the future or out of a sense of obligation (Angell, et al., 2014). Flexible funding for such needs as utility terminations and housing evictions could be provided, prolonging the interaction and providing further opportunity to deepen their engagement. Alternatively, co-location of other providers with flexible funding could fill this gap. At the very least, a warm hand-off (i.e. contacting the other provider and ensuring that the family gets connected) to other services should be policy in an effort to ensure families under stress are connected to the services they need. A follow-up phone call should also be employed to ensure that these families do not fall through the cracks in service availability and would serve as yet another opportunity to engage them in longer-term services at the Family Success Center.

Second, considerable variation in the data was observed between the sites. A likely reason for this is the practice used to engage families. In the survey of FSC directors, considerable variation was also reported in early engagement practices, such as whether each person was met with individually on their first visit versus a triage approach (Ocasio, 2013). Prior research has demonstrated an important link between qualities of

the helping professional and retention (Burt, Duke & Hargreaves, 1998; Girvin, DePanfilis, & Daining, 2007; Green, McCallister, & Tarte, 2004), which suggests that relationship building is an important component of practice. It would be expected that variation in engagement practices would relate to variation in ratings of family support practices. Mean ratings of the family support practices were relatively high in this study and the standard deviation was low. However, the mean scores varied significantly between the centers and were correlated with expectation of benefit, integrated motivation, injunctive social norms, descriptive social norms, and intentions. So, in general, participants felt they were engaged in a manner that was respectful, strengths-based, and affirming, although this did vary somewhat and was related to important variation in key motivating factors. The effects of various engagement practices should be explored to determine whether certain practices facilitate deeper engagement with the FSCs. While this study did not specifically examine these practices in detail, it is possible that an individualized, confidential process would provide a greater opportunity to form a relationship with the parent and help them engage in services, rather than a process whereby some new participants make it no further than getting a basic referral at the front desk.

Third, the importance of social networks should also be considered. Based on the descriptive social norms mean score and relationship to repeat service use, it is possible that this variable is measuring alternative support already available in parents' social networks. Descriptive social norms had a positive correlation with integrated motivation, injunctive social norms, and family support practices. However, it had a negative relationship to repeat service use and might be contributing to the inconsistent mediation

effect of intentions. Additionally, the quality of the support that is available from these networks is not known. Many of the participants of the FSCs come from communities with significant social disadvantages. Encouraging participants to engage their social networks in the FSC might help to retain those that have social networks with greater capacities. Furthermore, this would promote the Settlement House-like quality of the FSCs, where people of various capacities support each other and reach out to engage the community in social change (see California Family Resource Learning Circle, 2000; Lightburn & Kemp, 1994). Encouraging participants to bring a guest with them to an activity, with an incentive for both the participant and guest, could provide an opportunity to expand the reach of the FSC in a manner that also benefits the current participants. If this were done as a special incentive to first-time participants, it would directly target the negative relationship between descriptive social norms and the likelihood of repeating at least once after the initial visit.

Additionally, human service providers can engage in practices to improve the development of and enactment of intentions (Armistead et al., 2004). While this study did not find mediation to be significant, the possibility that intentions might be important cannot be dismissed due, in part, to the suppressor effect and possibility of inconsistent mediation. The intentional construct was thought to be particularly relevant for this study, as the FSCs, as a model of child maltreatment prevention, place more responsibility on families to engage in services than those that come to them (e.g. home visiting programs), are located in places they regularly attend (e.g. school-based services), or have some kind of leverage over them (e.g. child protective services). Baring these other service involvement mechanisms, it would seem important to strengthen the intention of

participants that come in for the first time to return. Every effort should be made to reduce barriers to service use and improve the expected tangible benefits. These aspects are at least somewhat under the control of the service provider. Child care, transportation assistance, and incentives to participate have proven effective at facilitating service use (Armistead et al., 2004).

While all of the families that came to an FSC had reasons for doing so, and many of these reasons suggested that the families could benefit from sustained involvement in family support services, there are various ways that families could endeavor to meet those needs. Return to the FSC suggests both a decision to continue to engage in family support services and a decision to engage with an FSC as the means to do so. Lack of return to the FSC doesn't necessarily mean that families aren't doing anything to address their needs and attain their goals. Policy-makers and researchers, however, worry about low repeat service use (ex. Gomby, Culroos, & Behrman, 1999; Gross, Julion, & Fogg; 2001; McCurdy & Daro, 2001) and view engaging every family that initiates involvement with a primary prevention program in sustained use as a way to 'shift the curve' on abuse and neglect (see Rose, 1985). Although there is no "right" repeat service use target, in this study, extreme variation in repeat service use by site suggests that rates could be improved. Determining the optimal level of service use to shape positive outcomes in family-well-being should be examined in future studies.

Limitations and Implications for Future Research

There were a number of limitations in this study that should be addressed by future research. First, non-English speaking parents were not included in this study due to lack of translated, validated scales and bi-lingual research assistants. FSCs were chosen

to participate that had fewer than 40% Spanish speaking participants so that the research would be relevant to the majority of their participants. Hispanic families that could participate in English were included, but this was a small proportion of the sample in this study. Also, this exclusionary criterion left out many of the FSCs in New Jersey, which appear to have become quite popular with Spanish-speaking families and limits the generalizability of this study. There may be differences in how Hispanic families participate in these services that we could not capture due to exclusions of FSCs, low sample size in the study, and masking through aggregation of Hispanics with other minority groups in our study. Future research should be conducted with translated scales and sample sizes large enough to validate the scales.

Second, selection of sites and participants can introduce bias (Black, 1999, Rubin & Babbie, 2008). The sites were not representative of all of the FSCs, but rather those that were stable and had the resources to participate in the project. Of particular concern in this study, organizational level factors can have an effect on service effectiveness (Yoo & Brooks, 2005). It is likely that center characteristics have important predictive ability and do not simply have an effect through perceptions of the participant, which would be consistent with findings from Daro and colleagues (2003) that found that 14% of the total variance explained by the model in the number of months the parent participated was related to the program site. Participant characteristics and repeat service use clearly varied by FSC in this study. Research staff also observed variation in services and approach to family engagement, while a survey of all FSC directors conducted during this time period (Ocasio, 2013) indicated a great deal of variation as well. It is not known to what extent results in this study were influenced by FSC characteristics. Future research

efforts should endeavor to involve at least a minimum of FSCs and participants within FSCs to conduct hierarchical linear modeling (HLM), which will allow for analysis between and within FSCs. Further, it would be expected that those that enter the doors of an FSC have higher motivation to engage in services than the general population, which limits the generalizability of these findings to those that have similarly already engaged with a service to some degree. Bias in self-report must also be considered, as participants may have already received what they desired, felt the program was important in their community regardless of whether they personally benefited, or liked the person they interacted with and therefore felt socially obligated to say nice things about the program.

Third, the standardized available measures used were problematic for a number of reasons. There were no standardized measures available for a number of key variables and little prior use of theorized constructs in related research. These variables were designed based on concepts from studies in other fields and, in comparison to other studies, have face validity. However, some of these measures were brief, in the pattern of previous studies. Internal validity scores from prior studies were not always reported and, given the changes made for this study, might not be a valid comparison. Further, many of these scales used problem-oriented language. To address motivation in a multi-service environment, where participants put their own frame on the reasons they are there, scale development is necessary for future research to reduce the reliance on problem-oriented language. This language may still be relevant for some participants, so various ways that participants conceptualize their reasons should be included, but worded in a strengths-based manner. This is particularly important for organizations that are implementing family support principles in their approach, as research methods can reflect upon the

program associated and should remain congruent with the experience of the service that is intended. There are some scales that take a family support principles approach, such as the Protective Factors Survey, but this work has not been extended across the range of psychological and social motivating factors deemed relevant in the theory review.

Integrated motivation may have particular utility for studies of universal services that take a strength-based, promotional approach. Further, descriptive social norms should be explored further to understand how social network knowledge and capacities might compete with this service model.

Further, two findings were particularly unexpected and indicate limitations in our understanding of the constructs. First, future research should explore why descriptive norms were negatively related to service use. It is possible that these participants had greater knowledge of other services available and may have also been involved in a larger number of other service providers, resulting in competition for the FSC. This should be explored in future research by asking these questions of families participating in survey research. Additionally, qualitative research and network analysis could be conducted to understand how social groups interact and influence each other towards or away from this type of service model. Second, the intentions construct is limited by the degree to which a person makes a rational, well-conceived decision, the possibility that intentions are unstable, that unforeseen barriers to service use or changes in a person's life may occur, and the possibility that a person was inaccurate at the time in assessing their ability to enact their intentions. In fact, intentions may be no more than a response to a question posed that is related to the motivating factors, rather than an independent expression of intent. Further research on the intentional construct should be conducted to determine

whether it is an independent psychological construct and under what conditions.

Two other challenges in this study were related to data collection procedures: low statistical power and the lag between first time service use and the interview. Some of the participants in the study (36.5%) returned to a Center before we were able to schedule them for an initial interview. Of these, nine did not return after our interview. Our inability to interview families before they returned at all is a limitation, but for this group in particular. They may be different than other non-repeaters, as they did repeat, just not after we asked them to rate their future likelihood of repeating. A self-administered survey provided at the end of participants' first visit to an FSC would garner a larger sample of diverse populations, improving the statistical power, relevance to non-English-speaking families, and purity of the measurement of first impressions.

Conclusion

This study examined intentions and repeat service use in a voluntary, universal, child maltreatment prevention and family support approach provided in neighborhood centers across New Jersey. The models contributed to our understanding of repeat service use and the final model predicted between 47% and 63% of repeat service use, which is common in many studies of behavior including an intentional construct (Armitage & Conner, 2001). Further, this was the only study of its kind to use theory-based constructs to understand repeat service use in a voluntary, multi-service, non-clinical, neighborhood-based, family support program. Each of these elements could have implications for understanding family engagement in the service and this study represents a unique contribution to the literature. In particular, the inclusion of integrated motivation and family support practices were particularly unique to this study. There are a number of

implications from this study for practice, policy, and research. In particular, results suggest a need to address engagement most particularly for those that enter the program for the express purpose of meeting their concrete needs. Further, engaging first time participants to bring a friend or relative might improve repeat service use for those with more service involved social networks. Additionally, given the nascence of the program and the extent of variability observed between sites, it is premature to make policy recommendations regarding ways to organize and fund family support programs to optimize engagement. Additional research is needed to understand the the implications of cross-site differences, assess the impact of integrated motivation in social service research, determine the reasons why social networks that are involved in social services appear to deter program participation, and examine the utility of the intentions construct in research.

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Appendix 1 -- Select Survey Questions

Demographics

Age

What is your age? (Open-ended)

Race/ethnicity

Which racial/ethnic categories best describe you?

- American Indian/Native American
- Asian
- Black/African American
- Hispanic/Latino
- Native Hawaiian/Pacific Islander
- Non-Hispanic White/Caucasian
- Other (describe)

Marital Status

What is your marital/relationship status?

- Married
- Domestic Partner/Civil Union
- Separated
- Widowed
- Single, never married
- Single, divorced

Education

What is the highest level of education you have completed? (Open-ended)

Employment

What is your current employment status? (Open-ended)

Psychological Motivating Factors

Perceived Need

What services or assistance were you hoping to receive from the Family Success Center when you initially came for services? (Open-ended)

Expectation of Benefit

For the next set of statements regarding your use of services at the Family Success Center, please indicate to what extent do you agree.

1. My family life will be much improved.
2. I will feel a lot better.
3. My family will get the help we need.
4. I have the time needed to participate in services at this time.
5. I feel comfortable to use services at the Center.
6. I would be comfortable speaking about my family with others at the Center.

Response categories: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree

Self-efficacy

The next questions ask about your past experiences. Please indicate to what degree you think each of these statements is true for you.

1. I can always manage to solve difficult problems if I try hard enough.
2. If someone opposes me, I can find the means and ways to get what I want.
3. It is easy for me to stick to my aims and accomplish my goals.
4. I am confident that I could deal efficiently with unexpected events.
5. Thanks to my resourcefulness, I know how to handle unforeseen situations.
6. I can solve most problems if I invest the necessary effort.
7. I can remain calm when facing difficulties because I can rely on my coping abilities.
8. When I am confronted with a problem, I can usually find several solutions.
9. If I am in trouble, I can usually think of a solution.
10. I can usually handle whatever comes my way.
11. I take the initiative to look for services for my family when it is needed.
12. I make sure service providers and educators treat my family appropriately.
13. When I need help for my family, I am able to ask for help from others.
14. My opinion is just as important as professionals' opinions when it comes to what my family needs.

Response categories: 1 = not true at all, 2 = hardly true, 3 = moderately true, 4 = exactly true

Integrated Motivation

People come to services like the Family Success Center for various reasons. To what extent do the following statements describe why you are currently participating in services at the Family Success Center?

1. I come to the FSC because I get personal satisfaction out of participating in social services.
2. I come to the FSC because it makes me feel good about myself.
3. I come to the FSC because I should have a better understanding of myself.
4. There may be a good reason to participate in these services, but personally I don't see any.
5. I come to the FSC because I would like to make changes in my current situation.
6. I come to the FSC because I would feel bad about myself if I were not doing anything about this problem.
7. I come to the FSC because I value the way these services allow me to make changes in my life.
8. If others weren't pushing me to do this, I wouldn't change a thing.
9. I come to the FSC because I am doing it for my good.
10. I come to the FSC because I am supposed to do it.
11. I do these services, but I'm not sure it's worth it.
12. I come to the FSC because I like being a part of the Family Success Center.
13. I come to the FSC because I don't have any choice.
14. I come to the FSC because I believe it is a good thing to do to find solutions to my problems.
15. I come to the FSC because I will get into trouble with family and friends if I don't.
16. I don't know, I don't see what these services bring me.
17. I come to the FSC because coming to the Family Success Center is something I do for me.
18. I come to the FSC because I would feel guilty if I were not doing anything about this problem.
19. I come to the FSC because through these services I feel that I can now take responsibility for making changes in my life.

Response categories: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree

Social Motivating Factors

Injunctive Social Norms

The next set of statements refers to your friends and family. Please indicate to what degree you agree with the following statements.

Most people who are important to me would think that...

1. It is a good idea to use services at the Family Success Center.
2. The reasons that brought me to the Family Success Center are problems.
3. Problems should be dealt with privately, not with a service provider.
4. It is a good idea to get help from a community program for my family.
5. Using social services is a good way to get help.

Response categories: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree

Descriptive Social Norm

Most people who are important to me...

1. Have used social service programs.
2. Have gone to parenting groups or other kinds of parenting support.
3. Have come to a Family Support Center.
4. Get help to solve their problems.
5. Use the services they're entitled to in this community.

Response categories: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree

Intervention Related Motivating Factor

Family Support Practices

These questions ask about your impressions regarding the Family Success Center so far. Please indicate to what degree you agree with the following statements about the Center and its staff.

1. Accepts our family as important members of the team in addressing our family's needs.
2. Helps us get all the information we want and/or need.
3. Helps us get the help we want from our family, friends, and community.
4. Blames me for my family's problems.
5. Points out what my family does well.
6. Listens to us.
7. Respects our family's beliefs, customs, and ways that we do things in our family.
8. Helps us do the same kinds of things that other families do.
9. Makes it clear that we as a family, not the professionals, are responsible for deciding what is done for our family.
10. Plans meetings at times and places that are good for our family.
11. Criticizes what we do with our child(ren).
12. Treats us with respect.
13. Makes negative judgments about us because of ways that we are different from the staff (such as race, income level, job, or religion).
14. Cares about our entire family.
15. Makes decisions that affect my family without asking me what I want.
16. Helps my family to meet our needs as we see them.
17. Suggests things that we can do for our child(ren) that fit into our family's daily life.
18. Understands that I know my child(ren) better than anyone else does.
19. Helps my family get services from other agencies or programs as easily as possible.
20. Talks in everyday language that we can understand.
21. Helps our family expect good things in the future for our children and ourselves.
22. Makes sure we understand our family's rights.
23. Accepts our feelings and reactions as normal for our situation.
24. Wants to hear what we think about this program.
25. Supports my making as many decisions as I choose about what is done for child and family.
26. Encourages me to speak up during meetings with professionals when there is something that I want to say.

Response categories: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree

Past Service Use

Have you used the following services in the past?

1. Parenting class, support group, parent/child activity
2. Home visiting parenting program
3. Child behavioral support
4. Family counseling
5. Money management workshop or counseling
6. Financial assistance program, excluding welfare
7. Welfare/cash assistance
8. Treatment for mental health or substance use concerns
9. Transitional housing services
10. DYFS services
11. Parent support programs at a child care center
12. Other

Response categories: yes/no

For each question, is the response was “yes”, participants were asked 2 follow-up questions:

1. Approximately how long did you use the service?

Response categories: less than 2 months, 2-4 months, 4-6 months, 6-12 months, more than a year.

2. On average, how frequently did you use the service during that period of time?

Response categories: weekly, twice per month, monthly, less than monthly.

Mediator

Intentions

1. Some parents come to the FSC for the first time and think they could use these services, whereas others decide that they don't need these services or could get these needs met another way. How likely is it that you will use the FSC services in the next 3 months?

Response categories: 1 -7, with end and mid points labeled 1 = not at all likely, 4 = uncertain, and 7 = very likely.

2. How important to you is it that you use the FSC services in the next 3 months?

Response categories: 1 -7, with end and mid points labeled 1 = not at all likely, 4 = uncertain, and 7 = very likely.