Predicting the Child Care Experiences of Foster Children:

An ecological study of Maryland foster families

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Introduction

There are currently 423,773 children in foster care in the United States (U.S. Department of Health Human Services, 2010a). Research into the lives of these children has focused almost exclusively on the role of the foster care system and, as compared with those who have not experienced foster care, has portrayed them as a uniformly at-risk subgroup of children. This is problematic for two reasons. First, although there is emerging evidence that foster families regularly use early care and education (ECE) programs (Lipscomb & Pears, 2011), children whose lives are affected by ECE and the child welfare system have fallen between the cracks of research that focus on one or the other (Meloy & Phillips, in press). Existing literature falls short of offering even basic descriptive data regarding the type, stability, and quality of foster children’s ECE experiences, and evidence regarding the developmental consequences of these experiences is completely lacking.

Second, although frequently portrayed as uniformly at-risk subgroups, high-risk subgroups of children (e.g. children in impoverished or single-parent homes) are actually characterized by wide variation in family characteristics and in the children’s developmental trajectories (Adams & Rohacek, 2010). As a high-risk subgroup, foster children are likely to be characterized by wide demographic variation. Especially pertinent to the focus of this study on ECE, there is evidence that-risk variation affects not only the types of ECE environments that young children experience – through parent selection processes – but also the way young children respond to these environments. New results from evaluations of early intervention programs are revealing that their impacts are not consistent- even within at-risk samples. For example, evidence from the Early Head Start evaluation indicates that while benefits accrued to children from moderate risk families, those from high risk families did not differ from control
children at comparable risk (U.S. Department of Health and Human Services, 2006). This implies that any effort to understand the developmental consequences for foster children of exposure to ECE needs to consider varying levels of risk within this population. This study is designed to address these interrelated gaps in the current empirical literature.

**ECE and Child Development**

Nearly 12 million children in the United States, or 63% of the 18.5 million children under the age of 5 years, are in some form of regular, non-parental ECE each week (Greenberg, 2011). Children’s ECE experiences affect self-regulation, academic achievement, and psychosocial functioning, beginning in early childhood and lasting through adolescence (Phillips & Lowenstein, 2011). However, recent studies also suggest that the magnitude and direction of ECE effects on children’s development may depend on ECE characteristics such as type and quality (NICHD ECCRN, 2005). Children who experienced higher quality early child care displayed better vocabulary scores in fifth grade as compared with children who experienced poorer quality care (Belsky et al., 2007), and Vandell and colleagues (2010) found that higher quality ECE predicted both higher cognitive-academic achievement and less externalizing behaviors at age 15.

The use of multiple arrangements – a common indicator of instability of care – is one characteristic of a child’s ECE experience that may negatively affect development (DeSchipper et al., 2004). Though nearly 15% of children younger than 5 regularly attend more than one ECE arrangement (Morrissey, 2009), the prevalence among foster children is currently unknown. In the general population, stability of care has consistent, positive impacts on children’s cognitive and social outcomes (Loeb et al. 2004). Instability detracts from the development of language comprehension (Tran & Weinraub, 2006) and is associated with less competent play, poorer
social behavior, problems adjusting to school, and a higher risk of severe externalizing problems (for a review see Morrissey, 2009). Further, research suggests that instability presents particular problems for more vulnerable children – defined as children growing up in low-income households or facing significant disruptions in their home lives – and is closely related to the instability of other domains of family life such as income, housing, health, and family composition (Adams & Rohacek, 2010). Accordingly, ECE instability has a number of implications for indicators of foster child and family well-being.

During the preschool years in particular, center-based ECE is often of better quality than home-based care. Compared with children who are primarily in home-based care, those in center-based care demonstrate stronger cognitive skills at 24 months, stronger language skills at 36 months, and stronger memory skills at 54 months over and above characteristics of the family and home environment (Loeb et al., 2004; NICHD, 2006). These findings are reinforced by evidence from relatively high quality preschool and Head Start programs (Gormley, Phillips, & Gayer, 2008). Importantly, the gains in school readiness and cognitive test scores associated with high-quality center-based ECE programs are especially pronounced among at-risk children (Burchinal, Peisner-Feinberg, Pianta, & Howes, 2002; Gormley, Phillips, & Gayer, 2008) whose experiences of poverty and stressful rearing circumstances are also common among foster children (Lipscomb & Pears, 2011).

The disruption of being removed from the biological home may compound existing risk factors and their effects on normal child development (Lewis et al., 2007; Rubin, O’Reilly, Luan, & Localio, 2007; Vig, Chinitz, & Shulman, 2005). Indeed, foster children exhibit a range of neurobiological, cognitive, academic, and psychosocial difficulties (Cooley & Petren, 2011; Lipscomb & Pears, 2011), and a majority of them share risk factors with traditionally at-risk (i.e.
impoverished, minority, and special needs) populations of children (Pinderhughes, Harden, & Guyer, 2007). Considering the positive effects of high quality ECE for children in poverty, it is entirely plausible that foster children could benefit similarly from experiencing developmentally supportive ECE (Meloy & Phillips, in press; Pinderhughes, Harden, & Guyer, 2007).

**ECE and Risk Variation**

Although studies of the general population suggest that parent demographic characteristics may predict ECE use (Kim & Fram, 2009; Lamb, 1998; Lipscomb & Pears, 2011), to our knowledge, no studies examine predictors of ECE use among foster families. As opposed to studies that examine the entire family-ECE mesosystem, studies that exclusively examine either the immediate family or the ECE environment fail to describe the full child-rearing environment (McCarntney, 2005). Indeed, indicators of child wellbeing must reflect the contextual circumstances in which children live beyond measures on the individual child and family levels (Coulton & Korbin, 2007), thus this study utilizes an ecological model that emphasizes the importance of examining both proximal family demographics and distal community characteristics (Belsky, 1980; Bronfenbrenner, 1986; McCartney, 2005). In this study, family characteristics include foster parent relationship to the child, income, education, and age. Community characteristics consist of a community risk index and Head Start program presence. Variation in these risk characteristics may affect child development both directly and through predicting ECE use.

**Family-Level Risk Characteristics**

Kinship care, in which the foster parent and child are related, is becoming increasingly common in the United States (Ehrle & Geen, 2002). In fact, federal policy requires that kinship care continue to be a viable placement option for children in child welfare (Adoption and Safe
Families Act of 1997). However compared with non-relative caregivers, kinship foster parents receive less support, services, and training (Cuddeback, 2004). Further, compared with non-relative caregivers, kinship foster parents are more likely to be single, older, and less educated (Harden, 2004; Lipscomb & Pears, 2011). Kinship status, as well as the associated demographic characteristics, may therefore act as a risk factor that affects child development directly or indirectly through predicting ECE selection.

Although kinship foster parents are more likely to live in poverty (Ehrle & Geen, 2002), poverty is a concern for all children under five years because its pervasive and lasting negative impacts are especially salient for young children. As compared with later years, low income during the preschool years exhibits the strongest correlation with low rates of future school achievement (Brooks-Gunn & Duncan, 1997; Lee & Burkham, 2002). Though poorer parents are less emotionally stable, less physically healthy, less likely to have positive parent-child relationships, and less likely to provide positive learning experiences in the home (Brooks-Gunn & Duncan, 1997), high quality ECE may serve a compensatory role for young children in impoverished homes. Indeed, high quality care may protect children from the negative effects of low income with respect to school readiness, receptive language, and expressive language (McCartney, 2005). However, family income is strongly associated with ECE choices (McCartney, 2005); compared with children in higher income families, children from more economically disadvantaged families are less likely to attend higher quality and center-based ECE settings (Greenberg, 2011 NICHD Early Child Care Research Network, 1996; Hudson & Levasseur, 2002; Kim & Fram, 2009; Lamb, 1998). This evidence suggests that foster parent income may affect their ECE choices, thereby producing varying levels of risk by limiting children’s exposure to more developmentally supportive care.
Foster parents also vary in levels of educational achievement. Compared with kin caregivers, non-relative foster parents have higher levels of educational attainment (Ehrle & Geen, 2002; Harden et al. 2004). According to the literature on the general population, better-educated parents are more likely to utilize higher quality ECE (Huston, Chang, & Gennetian, 2002; Singer et al., 1998); even controlling for varying levels of household income and minority status, higher maternal education is positively associated with using center-based ECE (Greenberg, 2011; Singer et al., 1999). As previous research suggests, foster parent educational achievement may affect ECE selection above and beyond other family characteristics such as household income. For example, regardless of their household income, better educated foster parents may place more value on higher quality and more educational ECE experiences.

Foster parent age may also affect ECE selection. Although few studies examine foster parent age, several studies suggest that children in kinship arrangements are more likely to live with older caregivers (Ehrle & Geen, 2002; Geen, 2000). However, studies of the general population suggest that older caregivers find it more difficult to provide for children (Jones Harden et al., 2004; Minkler & Fuller-Thomson, 1999). The physical condition of older caregivers may further restrict their ability to interact with children, and older caregivers may find it more difficult to muster the energy needed to care for young children (Ehrle & Geen, 2002; Kelley & Whitley, 2000). Studies of grandparents in the general population suggest that compared with those not caring for grandchildren, care-giving grandparents do report more limitations of daily activities, lower incomes, lower levels of marital satisfaction, and poorer health (Cuddeback, 2004; Fuller-Thomason et al., 1997; Kelley & Whitley, 2000; Minkler & Fuller-Thomson, 1999), and are also twice as likely to be diagnosed with clinical depression (Harden et al., 2004). It is particularly disconcerting that poor grandparent health correlates
strongly with poor grandchild health (Dowdell, 2004), and that the academic performance of children reared by grandparents is similar to those of children reared by single parents (Solomon & Marx, 1995). Similarly, foster parent age may be a risk factor in a child’s life by affecting the caregiver’s ability to interact with the child or limiting their access to particular ECE programs.

**Community-Level Risk Characteristics**

To our knowledge, although neighborhood conditions may affect child development (Bronfenbrenner, 1986; Brooks-Gunn & Duncan, 1997), no studies have examined variation in foster parents’ communities. In studies of the general population that control for the effects of individual family poverty, neighborhood affluence is associated with higher intelligence scores for children at ages 3 and 5, increased high school graduation rates, better parenting practices, and more provision of in-home learning experiences (Brooks-Gunn & Duncan, 1997; Klebanov, Brooks-Gunn, & Duncan, 1994). Further, even after adjusting for differences in socioeconomic characteristics of families, neighborhood characteristics affect childhood IQ, teenage births, and school-leaving (Brooks-Gunn, Duncan, Klebanov, & Sealand, 1993). Poor neighborhood quality - defined as high residential instability, high structural disadvantage, and low affluence - is significantly related to high levels of externalizing behavior in early adolescence (Beyers, Bates, Pettit, and Dodge, 2003). These results suggest that exposure to poor neighborhood conditions affects child development in the general population (Criss et al., 2009), and similarly, community conditions may increase the risks experienced by foster children.

Head Start is designed to serve disadvantaged communities on a local level, thus it regularly places programs in low-income communities. These neighborhood-based services may influence neighborhood indicators of child well-being (Coulton & Korbin, 2007). Head Start presence may capture compensatory factors for at-risk communities and may serve as a proxy for
at least a modicum of community organization. For example, a higher density of Head Start programs within a community may provide access to higher quality ECE options or may draw other service organizations to enter a community. On the other hand, precisely because the programs are specifically placed in low-income communities, Head Start presence may simply capture or suggest increased neighborhood and community risk.

**Present Study**

This study has two primary goals, each of which addresses the empirical gap at the intersection of child welfare and ECE. The first goal is to examine varying levels of risk within the foster care system using demographic information regarding Maryland foster parents, the communities in which they live, and the ECE that they use. In addition to exploring risk variation within the full sample, we examine risk variation between the kin and non-relative foster parent subsamples. We hypothesize that children in kin foster families will be at increased risk on both family and community risk measures and will be less likely to use ECE. If they do use ECE, we hypothesize that they will be more likely to use multiple arrangements and will be less likely to use center-based care. In effect, we posit that these characteristics will demonstrate varying levels of risk within the foster system.

The second purpose of the study is to use an ecological model to examine variation in risk at family and community levels as it affects foster children’s enrollment in ECE, the use of multiple arrangements, and the use of center-based care. This study is unique in its inclusion of measures of multiple risk domains as predictor variables; to our knowledge, no other study has examined multiple predictors of ECE use in foster families. We hypothesize that foster parents at-risk on the foster parent risk index, foster parents at-risk on the community risk index, and kin
foster parents will be less likely to use ECE, but if they do use ECE, will be more likely to use multiple arrangements and less likely to use center-based care.

Methods

Sample

The sample is composed of 84 Maryland foster parents caring for a child under the age of five years as of March 15th, 2011. Participants filled out a mailed survey (see Appendix) and their responses were merged with corresponding data from the Maryland Department of Human Resources (DHR) Children’s Electronic Social Services Information Exchange (CHESSIE), which contains child demographic and foster care placement information.

Table 1 presents sample demographic information. On average, foster parents in this sample were 47.6 years of age, with 11.9% above the age of 60. The majority of foster parents were nonwhite (60.7%), defined in this study as individuals who did not self-identify as exclusively non-Hispanic white. In addition, a majority of the foster parents were employed (55.4%), had incomes greater than $30,000 (69%), and had graduated from high school (81.5%).

Approximately half of the children in the sample were toddlers (ranging in age from 1 to less than 3 years; 51.2%), one quarter were preschoolers (ages 3-5 years; 27.4%) and the remaining children were infants (age less than 1 year, 21.4%). Child race could receive multiple codings. The majority of the sampled children (78.6%) were nonwhite, 50% identified as exclusively African American, and 59.5% identified as part African American. Child ethnicity was not significantly matched with caregiver ethnicity. Sex was evenly split in the sample (50% female) and child ages were stratified into infant (0-1 year; 21.4%), toddler (2-3 years; 43%), and preschool (3-5 years; 27.4%). The majority of children were removed from the home due to neglect (N=60) rather than as the result of physical (N=5) or sexual abuse (N=1).
Children were categorized as being in a “kinship placement” if the relationship of the
caregiver to child was grandparent \((N=26)\), aunt/uncle \((N=11)\), great aunt/uncle \((N=1)\), great
grandparent \((N=1)\), cousin \((N=1)\), or second cousin \((N=1)\). The sample was split evenly between
kin (50%) and non-relative foster parents (50%).

**Measures**

**Survey.** A 15-question foster parent survey (Appendix) was designed to collect
demographic information about foster parents (age at sampling, race/ethnicity, employment,
household income, education level, and relationship to child) as well as descriptive information
about the ECE arrangements that they had used for the target foster child (number, type, and
reasons for selection). The survey was designed to take less than 15 minutes to complete, and it
was based on parent interviews in the NICHD Study of Early Child Care (NICHD-ECCRN,
2006), a survey used in the Durham Child Health and Development Study (Pungello & Kurtz-
Costes, 2000), and information gleaned from a focus group of case workers in Montgomery
County, Maryland convened on February 5\(^{th}\), 2010.

**Administrative Data.** CHESSIE provided additional data on the participating foster
families. These variables include demographic information on the foster children (ethnicity,
disability status, date of birth, date of removal from biological home, and date of foster
placement), as well as factors instigating removal from the biological home (abandonment,
behavior, neglect, physical abuse, sexual abuse, parental relinquishment, biological parent
incarceration, drug addiction, alcohol addiction, and death).

**Procedure**

From the monthly inventory of their child welfare system \((N=657\) foster parents), DHR
identified a sample of all foster parents caring for a child under the age of five. DHR staff
stratified the sample by licensed (including both kin and non-relative) providers and non-licensed (i.e., only kin) providers. One hundred caregiver-child pairs were randomly selected from each group ($N=200$) and these 200 caregivers were mailed a copy of the optional survey that was incentivized with a $10 gift card. Since initial response rates were low (32%), a second wave of surveys was mailed to those who did not initially respond (see Brennan & Charbonneau, 2009). Ultimately, 84 foster parents responded to the survey (42% response rate). Preliminary analyses compared the respondents ($N=84$) with the non-respondents ($N=116$) on child demographics and reasons for removal. The survey respondents and the DHR randomized sample only differed on one variable: non-relative foster parents were significantly more likely to respond to the survey than were kin foster parents [$\chi^2(1, N=198)=7.585, p = .006$]. Although our sample did not differ on any other variables, suggesting that it is closely representative of Maryland foster parents caring for young children, the sample is likely to be more representative of non-relative foster parents than of kin foster parents in Maryland.

The final dataset was created by merging the survey responses ($N=84$) with the corresponding demographic information from the administrative dataset using the unique identification numbers assigned to each foster family by DHR at the time of sampling.

**Variable Definitions and Risk Indices**

**ECE.** In this study, ECE is defined as care by an individual other than the foster parent(s) that lasts more than 10 hours per week. Variables describing ECE experiences came from the survey. They included: whether or not the child is in a regular ECE arrangement (dichotomous), if so the number of arrangements, the location of the arrangement(s), and the relationship of the ECE provider(s) to both the primary caregiver (spouse, sibling, friend/neighbor, aunt/uncle, parent, or unrelated adult) and the child (parent, aunt/uncle, sibling, grandparent, or unrelated).
There were 52 children in ECE, and locations included home-based \((N=21)\), center/nursery \((N=26)\), and Head Start \((N=5)\). Only 12 children were in two or more ECE arrangements. The ECE locations were recoded into a dichotomous variable, combining center/nursery and Head Start into one code \((N=31)\), and all home-based arrangements into the other \((N=21)\). If the foster parent indicated that they or their spouse (within the same home) were an ECE provider, the response was not coded as a unique ECE arrangement \((N=21)\). This decision was made because it was evident that these foster parents were confusing being an ECE provider and being a foster parent (e.g. identified self as provider and location as home).

**Family-Level Risk Characteristics.** The foster parent risk index is composed of the following three indices: (1) household income below $30,000 (approximately 133% of the poverty line for a family of four), (2) education level below a high school diploma, and (3) foster parent age above 60. There were 23 foster parents in poverty, 15 foster parents with an education less than a high school diploma, and 10 foster parents over the age of 60. The foster parents’ scores on this risk index included zero \((N=43)\), one \((N=29)\), two \((N=8)\), and three risk factors present \((N=1)\). The final foster parent risk index was dichotomized: no-risk factors present \((N=43)\) or at least one risk factor present \((N=38)\).

**Community-Level Risk Characteristics.** There are no widely accepted standards for measuring community socioeconomic status or community risk (Robert et al., 2004). Since address-level demographic information is limited for this protected population, our analyses used basic 5-digit zip codes. Based on the community risk index in Robert et al. (2004), we created an index using the foster parent’s home zip code and the U.S. Census Bureau’s population data for that zip code (U.S. Census Bureau, 2000). The final community risk index included four variables from the 2000 Census for the zip code: median family income, percent unemployed,
percent of families with children under 5 in the home below the poverty line, and percent of the population over 25 with greater than a high school diploma. The median family income for the zip codes was $57,595 (SD=17629.78), and the median family income variable quartile distributions were: level 1 (median income greater than $68,000), level 2 (median income between $57,000-$68,000), level 3 (median income between $40,000-$57,000), and level 4 (median income less than $40,000). The mean percent of unemployed adults was 3.74 (SD=2.096), and unemployment quartile distributions were: level 1 (unemployment less than 2.4%), level 2 (unemployment between 2.4-3.5%), level 3 (unemployment between 3.4-5%), and level 4 (unemployment greater than 5%). The mean percent of families living under the poverty line was 14.80 (SD=12.92), and the quartile distributions of percent of families below the poverty line were: level 1 (less than 5% of families), level 2 (between 5.3-10.3% of families), level 3 (10.3-23.5% of families), and level 4 (more than 24% of families). The mean percent of the population with at least a high school diploma was 79.48 (SD=11.06), and the quartile distributions of the percent of the population over 25 with at least a high school diploma were: level 1 (less than 12.6%), level 2 (between 12.7-18.6%), level 3 (between 18.8-28.1%), and level 4 (more than 29%). The community risk index was created by summing the 4 measures to produce 1 composite community risk index, which was then divided into quartiles based on percent distributions: level 1 (score of 4-6), level 2 (score of 7-10), level 3 (score of 11-13), and level 4 (score of 14-16). This quartile index was used for chi-square analyses, and the index was dichotomized by combining levels 1 and 2 into low risk (N=46) and levels 3 and 4 into high risk (N=33) for use in regression analyses.

A Head Start presence variable was constructed by combining zip code information on each participant with publicly available Head Start data to determine the number of Head Start
programs within 0.5 miles, 5 miles, or 10 miles of the foster family (The Office of Head Start, 2011). Due to transportation and time limitations, it is reasonable to suggest that foster parents would be most likely to use the closest ECE opportunities, thus we opted to use data for 0.5 miles. The number of Head Starts within 0.5 miles of the sample zip codes ranged from 0 to 4, and the Head Start density variable was recoded into three levels: no Head Start program, one Head Start program, and two or more Head Start programs. Preliminary analyses demonstrated that 61 zip codes did not have a Head Start, 17 had one Head Start, 5 had two Head Starts, and 1 had four Head Starts within 0.5 miles. Due to small sample size, the final Head Start density variable was dichotomized into Head Start presence: either no Head Start ($N=61$), or at least one Head Start ($N=23$) within 0.5 miles of the zip code. It is important to note once again that very few children in the sample were enrolled in Head Start ($N=5$).

**Analytic Approach**

The first goal of this study is to examine varying levels of risk within foster families. Chi-square analyses are used to examine demographic predictors of risk on the family and community levels for the sample as a whole. Second, chi-square analyses are used to examine how kin and non-relative foster parent subgroups differ on these risk factors.

The second goal is to examine demographic and community correlates of ECE use. ECE use is examined using three dichotomous variables: regular use of any ECE, use of multiple arrangements, and the use of center-based arrangements. Chi-square analyses are used to describe demographic risk predictors for the full sample as well as the kin and non-relative foster parents as distinct subgroups. Logistic regressions were then run to predict ECE use, the use of multiple arrangements, and the use of center-based care from the foster parent’s relation to the child, the two risk indices, and Head Start presence, controlling for foster family demographics.
(child age and foster parent employment). The demographic variables that were entered as covariates in each model were those that correlated significantly with the ECE outcome of interest. In the case of ECE use, only foster parent employment correlated significantly ($r=0.610$). Neither of the demographic variables showed a significant correlation with the use of multiple arrangements. The use of center-based care was correlated only with child age ($r=0.301$). For use of ECE and the use of center-based care, the first regression model included only the covariates. For all outcomes, the next model (or, in the case of multiple arrangements, the first model) added the foster parent’s relation to the child. The third and fourth models added the risk indices. Because community risk was significantly correlated with both foster parent risk ($r=0.346$) and Head Start presence ($r=0.361$), while foster parent risk and Head Start presence were not significantly correlated ($r=0.121$), the third model for each outcome entered community risk and the fourth model replaced the community risk variable with both the foster parent risk and Head Start presence variables.

Results

We first present demographic information to examine family- and community-level risk variation for the full sample. We then use chi-square analyses to compare kin and non-relative foster parents on these variables. Next we examine the use of ECE within the full sample and the two subgroups, followed by presenting the results of chi-square analyses and logistic regression analyses examining risk factors that predict ECE use, the use of multiple arrangements, and the use of center-based arrangements.

Sample Demographics and Family Risk, Community Risk, and Head Start Presence

Family Risk. Table 1 presents full sample demographic information. The majority of foster parents were employed (55%), had a household income greater than $30,000 (69%), were
educated at least above a high school diploma (81.5%), and were below the age of 60 (85.7%).
Less than half of the sample (46.9%, N=38) was at-risk on the composite foster-parent risk index, and 9.8% (N=8) of foster families had two or more of these risk factors. Nonwhite \( \chi^2(1, N=81) =5.211, p =.022 \), and unemployed foster parents \( \chi^2(1, N=81) =6.290, p =.012 \) were more likely to be at-risk on the foster parent risk index.

**Community Risk.** The final community risk index was composed of four variables. The median family income for the zip codes was $57,595 (SD=17629.78). The mean percent of unemployed adults was 3.74 (SD=2.096). The mean percent of families living under the poverty line was 14.80 (SD=12.92). The mean percent of the population with at least a high school diploma was 79.48 (SD=11.06). The community risk index was split into quartile distributions for chi-square analyses, and the index was dichotomized into low- and high-risk categories for regression analyses: 41.8% of the sample was high risk on the community risk index. Low income foster families \( \chi^2(3, N=77) =20.019, p < .001 \) were more likely to be at-risk on the community risk index. Nonwhite foster families \( \chi^2(3, N=79) =13.683, p =.003 \) were more likely to be at the highest levels of community risk.

**Head Start Presence.** Only six zip codes had two more Head Starts within 0.5 miles. Due to little variation, the final Head Start density variable was dichotomized into a Head Start present \( (N=23) \) versus not present \( (N=61) \) variable. Unemployed \( \chi^2(1, N=83) =5.486, p =.019 \) and low income \( \chi^2(1, N=81) =5.965, p =.015 \) foster parents were more likely to live in communities with Head Start.

**Kin vs. Non-relative Demographic Comparisons and Correlates to Risk**

Preliminary analyses examined whether there were any differences in the children who were cared for by a kin or non-relative foster parent (Table 1). Paralleling previous findings in
the literature, kin providers were predominantly nonwhite (71.4%), and were more likely to be nonwhite than non-relative caregivers \(|\chi^2(1, N=84)=4.043, p=.044|\). The non-relative caregivers were evenly split between white and nonwhite (50%).

Although not significantly different, 14.3% of children in kin care lived with a foster parent above the age of 60, compared to 10% of children in non-relative care. Half of the kin providers (48.8%) had a household income that was less than $30,000, compared with 7.5% of non-relative providers; indeed kin foster families were more likely to be in poverty \(|\chi^2(1, N=81) =16.969, p <.01|\). Kin providers also had significantly lower levels of education (29.3% of kin providers had less than a high school diploma) than did non-relative providers (7.5%) \(|\chi^2(1, N =81) =6.358, p <.05|\). As predicted given these findings, compared with non-relative providers (20%), kin (73.2%) were more likely to be at-risk on the foster parent risk index \(|\chi^2(1, N =81) =22.984, p <.01|\).

**Community Risk.** The community risk variable was split into quartiles ranging from lowest risk to highest risk. Of the children in kin care, 17.9% were at lowest risk, 23.1% were at increased risk, 12.8% were at high risk, and 46.2% were at the highest risk. Of the children in non-relative care, 32.5% were at lowest risk, 42.5% were at increased risk, 22.5% were at high risk, and 2.5% were at the highest risk. This variable was dichotomized into high and low risk: 59% of children in kin care were at increased risk, compared with 25% of children in non-relative care. Similar to the foster parent risk index, kin \(|\chi^2(1, N =79) =9.371, p <.01|\) were more likely to be at-risk on the community risk index.

**Head Start Presence.** Of the children in kin care, 64.3% had zero and 36% had at least one Head Start program within 0.5 miles of their zip code. Of the children in non-relative care,
81% had zero and 19% had at least one Head Start programs within 0.5 miles. There was no relationship between foster parent relationship to the child and Head Start presence.

In sum, we found that kin foster parents were more likely than non-relative foster parents to be non-white, to live in poverty, to be less educated, and to be at-risk on both foster parent and community risk indices.

**ECE Use Among Maryland Foster Families**

Table 1 provides descriptive statistics of ECE use among Maryland foster families. Descriptive statistics indicate that 61.9% of the foster children were in some form of ECE (N=52). Of those in care, 75% were in one arrangement and 23% were in two or more arrangements; 60% were in center-based care (N=31). Of the children in kin care, 62% were in ECE, and of those in care, 69% were in one arrangement, 30.7% were in two or more arrangements; 46% were in a center-based arrangement. Of those in non-relative care, 60% were in ECE, and of those in care, 84% were in one arrangement, 16% were in two or more arrangements; 76% were in a center-based arrangement.

**Predicting ECE Experiences of Foster Children**

**Predicting ECE Use.** Although there were no significant relationships between ECE use and foster parent education or age, lower income foster parents were less likely to use ECE [$X^2(10, N=81)= 20.362, p<.026]$; indeed foster parent income likely drives the finding that those at-risk on the foster parent risk index were less likely to use ECE [$X^2(1, N=81)= 4.166, p=.041$]. There was no relationship between ECE use and community risk, nor was there a relationship between Head Start presence and the use of ECE.

Table 2 shows the results for predicting ECE use covarying foster parent employment and relationship to the child. Foster parent relationship to the child did not predict the use of
ECE. In model 2, controlling for foster parent relationship to the child, employment positively predicted the use of ECE ($\beta=3.022$, $SE=.609$, $p<.001$). When community risk was added as a predictor in model 3, employment remained as a positive predictor of the use of ECE ($\beta=3.069$, $SE=.645$, $p<.001$). Again, when both foster parent risk and Head Start presence were included as risk indices in model 4, employment remained a significant predictor of the use of ECE ($\beta=3.342$, $SE=.724$, $p<.001$). In sum, children of employed foster parents were twice as likely to be in ECE. Foster parent risk and community risk did not predict ECE use. Although marginally significant, children in zip codes with Head Starts were approximately four times more likely to be in ECE ($\beta=1.401$, $SE=.739$, $p=.058$), although not necessarily Head Start.

**Predicting the Use of Multiple Arrangements.** The number of ECE arrangements utilized was examined only for those foster families using ECE. Foster parent ethnicity, child ethnicity, and child age were not related to the number of arrangements. There was also no relationship between the number of arrangements and kin vs. non-relative foster arrangement. Those at-risk on the foster parent risk index were more likely to use multiple arrangements \[X^2(2, N=52) = 5.243, p=.022]. There was a trend for low income foster parents to be more likely to use multiple arrangements \[X^2(1, N=52) = 3.037, p=.081\]. Less educated foster parents were more likely to use multiple arrangements \[X^2(1, N=52) = 8.278, p=.004\]. Foster parent age was not related to the number of arrangements. There was no relationship between number of arrangements and community risk. Greater Head Start presence was associated with a higher likelihood of using two or more ECE arrangements \[X^2(6, N=84) = 18.887, p=.004\].

Table 3 shows the results of the binary logistic regression predicting the number of arrangements used. Foster parent relationship to the child did not predict the use of multiple arrangements. Foster parent risk was marginally associated with using multiple arrangements,
with those at-risk being over six times more likely to use multiple arrangements ($\beta=1.401$, $SE=.739$, $p<.058$). Although marginally significant, those at-risk on the community risk index were five times more likely to use multiple arrangements ($\beta=-2.043$, $SE=.940$, $p=.084$). Foster parents with a Head Start program within 0.5 miles were more than ten times more likely to use multiple arrangements ($\beta=2.351$, $SE=.834$, $p=.005$).

**Predicting the use of Center-Based Care.** The use of a center-based arrangement was examined only for foster families using ECE. Foster parent and child ethnicity were not related to the use of center-based care. Foster families with older children were more likely to use center-based arrangements [$X^2(2, N=52)=10.610$, $p=.005$]. Kin foster parents were less likely to use center-based arrangements [$X^2(1, N=52)=3.914$, $p=.048$]. Those at-risk on the foster parent risk index were less likely to use center-based care [$X^2(1, N=52)=5.194$, $p=.023$]. Those with an income greater than $30,000 [$X^2(1, N=52)=4.476$, $p=.034$] and those with an education greater than high school [$X^2(1, N=52)=4.705$, $p=.030$] were more likely to use a center-based arrangement. There was no relationship between the use of a center-based arrangement and foster parent age. Those at-risk on the community risk index were less likely to use center-based care [$X^2(1, N=52)=8.890$, $p=.031$]. There was no relationship between Head Start presence and use of center-based arrangements.

Table 4 shows the results of the binary logistic regression predicting the use of center-based arrangements, using child age and foster parent-child relationship as covariates. In model two, controlling for foster parent relationship to the child, child age positively predicted the use of center-based arrangements ($\beta=.429$, $SE=.241$, $p=.075$). When community risk was added as a predictor in model three, child age failed to reach significance and community risk negatively predicted the use of center-based care ($\beta=-1.628$, $SE=.795$, $p=.041$). Those at-risk on the
community risk index are 80.4% less likely to use center-based care. Finally, when both foster parent risk and Head Start presence were included as risk indices in model four, child age remained a significant predictor of center-based care ($\beta=.498$, $SE=.255$, $p=.051$); older children were 1.645 times more likely to be in center care, per year.

**Discussion**

This study addresses the empirical gap at the intersection of child welfare and ECE in two ways. First, we examine varying levels of risk within the foster care system using descriptive, demographic information regarding Maryland foster parents, the communities in which they live, and the ECE that they use. Our goal was to explore disadvantages within the foster system by examining whether certain foster children may be at increased risk due to their family characteristics, community characteristics, or ECE experiences. Our hypothesis that children in kin foster families would be at increased risk was confirmed. Specifically we found that kin foster parents were more likely to live in poverty, to be less educated, and to be over the age of 60. As expected given these findings, kin were more likely to be at-risk on the foster parent risk index. These results confirm previous findings that children in kinship care are at higher risk than those in traditional foster arrangements (Ehrle & Geen, 2002; McCartney, 2005), and following our ecological model, expand this finding to include increased risk at the community level. Indeed as compared with children in non-relative foster care, children in kin care were more likely to be at-risk on the community risk index and also more likely to be at the highest level of community risk.

We also examined predictors of ECE use, the use of multiple arrangements, and the use of center-based arrangements. Beginning with the use of ECE, our initial chi-square analyses suggested that those at-risk on the foster parent risk index were less likely to use ECE, however
this relationship failed to attain significance when controlling for foster parent employment. Employed foster parents likely need to use ECE to support their employment, and as suggested by the positive relationship between income and ECE use in this study, they may also be more capable of paying for ECE. In addition to the contribution of employment to reliance on ECE, Head Start presence also emerged as a significant predictor of ECE use. Importantly, this finding occurred within a sample with only minimal use of Head Start (N=5). It is unclear why this relationship would occur: Head Start presence may, as predicted, capture compensatory factors for community risk; Head Start presence may increase general awareness of the positive effects of ECE use, thus creating a community contagion effect; or Head Start presence may be a proxy for increased availability of other ECE arrangements.

With regard to the use of multiple arrangements, those at-risk on the foster parent risk index were more likely to use multiple arrangements, and income and education appeared to drive this relationship. Further, both community risk and Head Start presence predicted the use of multiple arrangements. These findings are particularly worrisome because children who were already at-risk based on family and community characteristics were more likely to experience instability of care, which previous research suggests presents particular problems for more vulnerable children (DeSchipper et al., 2004; Morrissey, 2009; Tran & Weinraub, 2006). ECE instability may be even more disruptive for these children whose developmental outcomes are already at increased risk by dint of their encounter with the child welfare system.

With respect to the use of center-based care, this study confirms prior evidence that child age positively predicts the use of center-care (Loeb et al., 2004, NICHD ECCRN, 2005), and also finds that community risk negatively predicts the use of center-based care. Some possible interpretations are that center-based arrangements may not be located in high risk communities,
or that foster parents in high risk communities may not be able to afford the available center-based care. Regardless, we know that center-based ECE is often of better quality than home-based ECE, and further that the gains in school readiness and cognitive test scores associated with high-quality center-based ECE programs are especially pronounced among at-risk children (Burchinal, Peisner-Feinberg, Pianta, & Howes, 2002; Gormley, Phillips, & Gayer, 2008), thus children who are already at-risk by nature of their community surroundings are at increased risk because they are less likely to be in center-care.

Conclusions, Limitations, and Suggestions for Future Research

Several important findings emerge from this study. First, foster children vary significantly on both family- and community-level risk factors. Considering that the impacts of ECE are not consistent even within at-risk samples (U.S. Department of Health and Human Services, 2006), future efforts to understand the developmental consequences of ECE exposure among foster children must consider risk variation.

This study also confirms prior evidence that children in kinship arrangements are at increased risk as compared with children in non-relative foster homes, suggesting that (1) future studies on foster children should differentiate the two subpopulations, and (2) public policies regarding foster children should pay special attention to kinship providers, especially considering that kinship foster care is becoming increasingly common in the United States (Ehrle & Geen, 2002), that kinship foster parents receive less support, services, and training than non-kin foster families (Cuddeback, 2004), and that children in kinship care are at higher risk on both family- and community-level factors than those in traditional foster arrangements.

In this study, variation in risk on both family and community levels affected ECE utilization: employment and Head Start presence positively predicted the use of ECE; foster
parent risk, Head Start presence, and community risk predicted the use of multiple arrangements; and child age positively predicted and community risk negatively predicted the use of center-based arrangements. As with other high-risk groups, foster children could benefit from high quality ECE (Meloy & Phillips, in press; Pinderhughes, Harden, & Guyer, 2007), yet risk variation within this population increases risk by affecting both the use of ECE in general, and the reliance on center-based ECE. While future studies are likely to examine variation in risk on the family level due to convenience of data, neighborhood factors also influence children though increasing parent stress and disrupting parenting practices (Capaldi, DeGarmo, Patterson, & Forgatch, 2002), as well as by affording or denying important, developmentally beneficial opportunities for children (Coulton & Korbin, 2007) and their caregivers. Future studies examining risk in these populations should more accurately contextualize foster child development by including community level variables.

Limitations. Although survey respondents only differed from the DHR randomized sample on one demographic variable, this study does not strictly meet the definition for a randomized sample and may not be representative of all foster families in Maryland. Although we received a 42% survey response rate, our sample size was small and we had limited variation in our data. Further, several of our variables were affected by available information: our community-level variables were restricted to basic five-digit zip codes because street-level addresses are confidential for this protected population; Census data availability limited our demographic information to the 2000 Census; our foster parent risk index included a household income variable rather than an income-to-needs variable because we could not specify the number of children in the home; and finally we could not include measures of ECE quality.
Regardless, this multi-level, exploratory study highlights questions that should be addressed by more representative studies - especially those using national, administrative datasets that currently provide the majority of our information on foster children – in the future. Specifically, our results demonstrate that not only is there variation in risk on both family and community levels for this already at-risk population, but that variation in risk on both of these levels predicts ECE utilization, which has the potential to either compensate or compound risk. Future studies would be remiss in treating foster children as a uniformly at-risk population and must examine risks to child development ecologically using both proximal family levels and distal community levels.
References


care with child’s adjustment. Early Childhood Research Quarterly, 19, 257–272


853-877.


Summary File 3 (SF 3) – Sample Data. Retrieved December 20, 2011, from:

factfinder2.census.gov


Appendix

Foster Parent ID # _____________ Date ________________

DEMOGRAPHIC INFORMATION

1. What is your current age? _____ years

2a. Do you consider yourself to be African American, White, American Indian, Asian or Pacific Islander, Latino (that is, of Mexican, Puerto Rican, Cuban, Caribbean, or Latin American descent), or something else?
   _____ African American      _____ Asian or Pacific Islander
   _____ White                  _____ Latino
   _____ American Indian       _____ Other (specify _____________)

2b. Do you consider yourself to be of Hispanic descent? _____ yes _____ no

3a. Are you currently employed? _____ yes _____ no

3b. What is your occupation? ________________________________

3c. How many hours per week do you typically work? ______

RELATIONSHIP TO CHILD (Child’s name is listed in cover letter)

4a. Are you the child’s primary caregiver? _____ yes _____ no

4b. Please specify your relationship to the child
   _____ Child’s sibling over the age of 18           _____ Child’s aunt or uncle
   _____ Child’s grandparent                        _____ Child’s Godparent
   _____ Unrelated Adult                           _____ Other (Please specify): ____________________

CURRENT CHILD CARE ARRANGEMENT

5a. Is the child currently cared for by someone other than yourself on a regular basis (more than 10 hours per week)? _____ yes _____ no
   
   If child is not currently in any child care arrangement, skip to question 7.

5b. How many different arrangements is the child in (for more than 10 hours per week)?

   Example: if the child goes to day care 20 hours per week and then stays with your relative for 20 hours, the child is in 2 arrangements).
   
   _____ 1
   _____ 2
   _____ 3
   _____ more than 3
5c. Where is the primary (greatest number of hours) child care arrangement located?
   ____ Your Home          ____ Center/ nursery
   ____ Someone else’s home __  ____ Head Start
   ____ Other (Please Specify: ____________________________)

5d. What is the Primary childcare provider’s relationship to YOU?
   ____ Husband/ Wife/ Partner  ____ Aunt/Uncle
   ____ Sibling                  ____ Parent
   ____ Friend or Neighbor      ____ Unrelated Adult

5e. What is the Primary child care provider’s relationship to the CHILD?
   ____ Parent                   ____ Sibling
   ____ Aunt/Uncle              ____ Grandparent
   ____ Unrelated Adult

5f. Please rank your top three reasons for choosing this child care arrangement (Number the most important reason 1, the second most important reason 2, etc.)?
   ____ Cost
   ____ Funding/ Agency requirement to receive funding
   ____ Convenient Hours
   ____ Convenient Location
   ____ Quality of care provided
   ____ Quality of the environment
   ____ Quality of the program
   ____ Preference for relative provider
   ____ Preference for home environment
   ____ Preference for center environment
   ____ Availability
   ____ Other (Please specify______________)

5g. How do you pay for this child care arrangement? (Check all that apply)
   ____ Out of pocket          ____ Payment is made directly by agency
   ____ Agency reimburses me   ____ Child care subsidy
   ____ Arrangement is free    ____ Other (Please Specify):________________
If child is only in one regular care arrangement skip to question 7.

6a. Where does the Secondary (second largest number of hours) child care occur?

_____ Your Home
_____ Center/ nursery
_____ Someone else’s home
_____ Head Start
____ Other (Please Specify: ________________________________)

6b. What is this childcare provider’s relationship to YOU?

___ Husband/ Wife/ Partner
___ Aunt/Uncle
___ Sibling
___ Parent
___ Friend or Neighbor
___ Unrelated Adult

6c. What is this child care provider’s relationship to the CHILD?

_____ Parent
_____ Sibling
_____ Aunt/Uncle
_____ Grandparent
_____ Unrelated Adult

6d. Please rank your top three reasons for choosing this child care arrangement (Number the most important reason one, the second most important reason 2, etc.)?

____ Cost
____ Funding/ Agency requirement to receive funding
____ Convenient Hours
____ Convenient Location
____ Quality of care provided
____ Quality of the environment
____ Quality of the program
____ Preference for relative provider
____ Preference for home environment
____ Preference for center environment
____ Availability
____ Other (Please specify________________)

6e. How do you pay for this child care arrangement? (Check all that apply)

_____ Out of pocket
_____ Payment is made directly by agency
_____ Agency reimburses me
_____ Child care subsidy
_____ Arrangement is free
_____ Other (Please Specify):____________________
BELIEFS

7. Of the following types of care arrangements, which would be your first choice for your foster child, if you had no other constraints?
   ______ no day care (i.e. in home care by yourself or your husband/partner)
   ______ in-home care by someone other than yourself or your husband
   ______ family day care in someone else’s home
   ______ center day care

8a. Do you think there are any positive effects of childcare for your foster child (care by someone other than yourself or husband/partner)?
   _____ yes  _____ no (if no, skip question 8c)

8b. What are the positive effects?

8c. Do you think there are any positive effects of this type of care for you? _____ yes  _____ no (if no, skip question 8e)

8d. What are the positive effects for you?

8e. Do you think there are any negative effects of childcare for your foster child (care by someone other than yourself or husband/partner)?
   _____ yes  _____ no (if no, skip question 8g)

8f. What are the negative effects?

8g. Do you think there are any negative effects of this type of care or you?
   _____ yes  _____ no (if no, skip question 9h)
8h. **What are the negative effects for you?**

8i. **What is your worst fear about child care?**

---

**How much do you agree with the following statements on a scale of 1 to 5 where 1 is completely disagree, 2 is mostly disagree, 3 is neither agree nor disagree, 4 is mostly agree, and 5 is completely agree?**

**9a. Foster parents of young children should stay home and not work.**

<table>
<thead>
<tr>
<th></th>
<th>completely disagree</th>
<th>mostly disagree</th>
<th>neither</th>
<th>mostly agree</th>
<th>completely agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>disagree</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

**9b. It's all right for foster parents of young children to work.**

<table>
<thead>
<tr>
<th></th>
<th>completely disagree</th>
<th>mostly disagree</th>
<th>neither</th>
<th>mostly agree</th>
<th>completely agree</th>
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<tbody>
<tr>
<td>disagree</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

---

**ENVIRONMENTAL CONSTRAINTS**

**10. Financially, do you feel you must work for the income?**

_____ yes      _____ no

**11a. Do you have certain career goals for yourself?**

_____ yes      _____ no

**11b. How committed are you to your employment or career on a scale of 1 to 5 where 1 represents not at all committed, 3 represents somewhat committed, and 5 represents very committed?**

<table>
<thead>
<tr>
<th></th>
<th>not at all</th>
<th>somewhat committed</th>
<th>very committed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

**12a. What do you think about the quantity of your child care options on a scale of 1 to 5 where 1 represents very few options, 3 represents some options, and 5 represents a great many options?**

few         some           great many
12b. What do you think about the quality of the child care options that are available to you on a scale of 1 to 5 where 1 represents that almost none of the options are of good quality, 3 represents that about half the options are of good quality, and 5 represents that almost all are of good quality?

<table>
<thead>
<tr>
<th>almost none</th>
<th>half</th>
<th>almost all</th>
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<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

DEMOGRAPHIC INFORMATION (CONTINUED)

14a. Think about all of the income from persons who live in the same house with you. Which category is closest to your household income last year (up to January 1)?

- _____ $10,000 or below
- _____ over $10,000 to $20,000
- _____ over $20,000 to $30,000
- _____ over $30,000 to $50,000
- _____ over $50,000 to $70,000
- _____ above $70,000

15. Which of the following is the highest educational level you have attained?

- _____ below high school (highest grade completed _____)
- _____ high school diploma
- _____ vocational degree (for example, beauty school)
- _____ some college
- _____ associate degree
- _____ Bachelor's degree
- _____ some postgraduate work
- _____ Master's degree
- _____ Ph.D., M.D., J.D., etc.
### Table 1

**Comparison of Kin and Non-relative Families on Risk Indices**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Kin Caregivers N (%)</th>
<th>Non-related Caregivers N (%)</th>
<th>Total Survey Respondents N (%)</th>
<th>DHR Sample N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child Nonwhite</td>
<td>34 (.81)</td>
<td>32 (.762)</td>
<td>66 (.786)</td>
<td>129 (.645)</td>
</tr>
<tr>
<td>Child Female</td>
<td>22 (.524)</td>
<td>20 (.476)</td>
<td>42 (.5)</td>
<td>92 (.46)</td>
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<tr>
<td>Child Infant (0-1 years)</td>
<td>12 (.29)</td>
<td>.6 (.143)</td>
<td>18 (.214)</td>
<td>32 (.160)</td>
</tr>
<tr>
<td>Child Toddler (1-3 years)</td>
<td>19 (.45)</td>
<td>24 (.571)</td>
<td>43 (.512)</td>
<td>103 (.515)</td>
</tr>
<tr>
<td>Child Age (3-5 years)</td>
<td>11 (.262)</td>
<td>12 (.286)</td>
<td>23 (.274)</td>
<td>62 (.312)</td>
</tr>
<tr>
<td>Foster Parent Nonwhite</td>
<td>30 (.714)</td>
<td>21 (.5)</td>
<td>51 (.607)</td>
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<tr>
<td>Foster Parent Unemployed</td>
<td>21 (.5)</td>
<td>16 (.39)</td>
<td>37 (.446)</td>
<td>--</td>
</tr>
<tr>
<td>Foster Parent Low Income</td>
<td>20 (.488)</td>
<td>3 (.075)</td>
<td>23 (.274)</td>
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</tr>
<tr>
<td>Foster Parent Low Education</td>
<td>12 (.293)</td>
<td>3 (.075)</td>
<td>15 (.185)</td>
<td>--</td>
</tr>
<tr>
<td>Foster Parent Age Above 60</td>
<td>6 (.143)</td>
<td>4 (.1)</td>
<td>10 (.122)</td>
<td>--</td>
</tr>
<tr>
<td>ECE Use</td>
<td>26 (.619)</td>
<td>25 (.595)</td>
<td>52 (.619)</td>
<td>--</td>
</tr>
<tr>
<td>One Arrangement</td>
<td>18 (.692)</td>
<td>21 (.840)</td>
<td>39 (.750)</td>
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</tr>
<tr>
<td>Multiple Arrangements</td>
<td>8 (.307)</td>
<td>4 (.160)</td>
<td>12 (.231)</td>
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</tr>
<tr>
<td>Center-based Care</td>
<td>12 (.462)</td>
<td>19 (.760)</td>
<td>31 (.596)</td>
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<tr>
<td>Home-based Arrangement</td>
<td>14 (.538)</td>
<td>6 (.240)</td>
<td>21 (.404)</td>
<td>--</td>
</tr>
<tr>
<td>Foster Parent Risk Index</td>
<td>30 (.732)</td>
<td>8 (.2)</td>
<td>38 (.469)</td>
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<tr>
<td>Community Risk Index</td>
<td>23 (.59)</td>
<td>10 (.25)</td>
<td>33 (.418)</td>
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<tr>
<td>Head Start Present</td>
<td>15 (.357)</td>
<td>8 (.19)</td>
<td>23 (.274)</td>
<td>--</td>
</tr>
</tbody>
</table>

*Note: * = p < .05, ** = p < .01*
Table 2

*Summary of Binary Logistic Regression Predicting the Use of Childcare*

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
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</thead>
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<tr>
<td>Employment</td>
<td>2.964**</td>
<td>3.022**</td>
<td>3.069**</td>
<td>3.342**</td>
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<td></td>
<td>.052</td>
<td>.049</td>
<td>.046</td>
<td>.035</td>
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<tr>
<td>Kin Relationship</td>
<td>.595</td>
<td>.609</td>
<td>.645</td>
<td>.724</td>
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<tr>
<td>Foster Parent Risk</td>
<td>.352</td>
<td>1.421</td>
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<tr>
<td>Community Risk</td>
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<td>.767</td>
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<tr>
<td>Head Start Present</td>
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<td></td>
<td>1.401*</td>
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Note: * = p < .05, ** = p < .01, * = p < .01
Table 3

*Summary of Binary Logistic Regression Predicting the Use of Multiple Childcare Arrangements*

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th></th>
<th>Model 2</th>
<th></th>
<th>Model 3</th>
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<tr>
<td></td>
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<td>OR</td>
<td>SE</td>
<td>B</td>
<td>OR</td>
<td>SE</td>
</tr>
<tr>
<td>Kin Relationship</td>
<td>.894</td>
<td>2.444</td>
<td>.690</td>
<td>1.626</td>
<td>.839</td>
<td>.912</td>
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<tr>
<td>Foster Parent Risk</td>
<td>1.852*</td>
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<td>.984</td>
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<tr>
<td>Community Risk</td>
<td>-2.043</td>
<td>5.082</td>
<td>.940</td>
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</tr>
<tr>
<td>Head Start Present</td>
<td>2.351**</td>
<td>10.500</td>
<td>.834</td>
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</tr>
</tbody>
</table>

*Note: * = p < .1, * = p < .05, ** = p < .01*
Table 4

Summary of Binary Logistic Regression Predicting the Use of Center-based Arrangements

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>OR</td>
<td>SE</td>
<td>B</td>
<td>OR</td>
</tr>
<tr>
<td>Kin Relationship</td>
<td>-.963</td>
<td>.382</td>
<td>.615</td>
<td>.031</td>
</tr>
<tr>
<td>Foster Parent Risk</td>
<td></td>
<td></td>
<td>-1.134</td>
<td></td>
</tr>
<tr>
<td>Community Risk</td>
<td>-.628*</td>
<td>.196</td>
<td>.795</td>
<td></td>
</tr>
<tr>
<td>Head Start Present</td>
<td></td>
<td></td>
<td></td>
<td>.818</td>
</tr>
</tbody>
</table>

Note: * = p < .1, ** = p < .05, *** = p < .01