# Instability in family foster care placements: An event history analysis

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ABSTRACT: The need for stability of foster care placement is widely recognized. The hope with any family foster care placement is that this is the last home a child will have before returning to the birth family or otherwise leaving foster care. Unfortunately, most children in foster care experience placement disruption at some point. To identify factors related to increased risk of disruption, this paper conducts an event history analysis of placements of 659 cases selected for an investigation of long-term foster care in Washington and Oregon. In addition to Hispanic/Latino ethnicity, a history of sexual or physical abuse, and whether the case was served by a private non-profit agency versus the state foster care administration, I find that indicators of previous placement instability are associated with the hazard of the current placement disrupting. Net of the effects of time in care and other variables, the total number of previous family foster care placements and of runaway incidents and the proportion of time since first case opening spent in family reunification attempts are each uniquely predictive of disruption. Essentially, instability begets instability, raising the stakes for attempts to match foster children to families and support both children and families once placed.

## Background and Hypotheses

While the intent of the foster care system in the US has been to provide temporary care for children as their families of origin work to overcome the issues that prompted the removal of the children, many children have faced long spells in foster care. Attention to this problem arose with discussion of foster care drift in the 1960s and 1970s and the resulting permanency planning movement (e.g, Kemp & Bodonyi, 2002; Pecora et al., 2009). Child welfare administrators and researchers remain concerned with the plight of children moving from placement to placement (Kemp & Bodonyi, 2002; Newton, Litrownik, & Landsverk, 2000; Ryan & Testa, 2004).

Although numerous efforts have been implemented to return foster care to its short-term intentions, many children remain in care for long periods. In its latest estimates, the federal government reports that the median length of stay of children currently in foster care is approximately 15.5 months, with a mean of 28.3 months. Approximately 24% of children in care have been in care for 3 or more years (Department of Health and Human Services [DHHS], 2008). Children in care for such long periods, who have already experienced at least one disruptive life event (removal from the birth family) and likely multiple events (as child abuse and neglect is the usual reason for attention from the child welfare system), are therefore at substantial risk of experiencing the further disruption of their current foster care placement. In 2005, the median state proportion of children in foster care for less than 12 months with two or fewer placements was 83.3%. This median dropped to 59.4% for children in care 12-24 months and to 32.3% for children in care 24 months or longer (DHHS, no date). “For too many children, what should be a short-term refuge becomes a long-term saga, involving multiple moves from one foster home to another” (Pew Commission on Children and Foster Care, 2004, p. 1). That is, a system designed to provide stability often fails to do so.

Placement disruption is accompanied by changes in more than just where the child sleeps at night—relationships end and new caregivers must be adjusted to, frequently the child is required to change schools, etc. The support, nurturance, and predictability that children who have experienced disruptive life events need to promote recovery and healthy development (American Academy of Pediatrics, 2000) are difficult to provide when the child is moved from placement to placement. Thus, an important research question for policy makers and practitioners concerns factors related to the disruption of a foster care placement theoretically intended to be stable and long-lasting. As long as a child is to remain in care, ideally that child should not move from the current family foster care placement to another.

Taking stability as the ideal, therefore, what factors are associated with not meeting that ideal? The current paper presents an analysis of factors related to the risk of disruption of foster care placements in a sample of foster children in care for at least one continuous year during adolescence. This analysis augments previous studies that have examined number of placements or other measures of stability without accounting for the importance of the timing of a change versus the child's developmental trajectory (Wulczyn, Kogan, & Harden, 2002). Little previous research has considered the timing of placement disruption or factors associated with risk of disruption. Previous applications of event history analysis (a.k.a. survival analysis) to foster care data have concentrated on factors associated with achieving permanency through adoption or guardianship. Many children in foster care are not fortunate enough to attain such an outcome, or to return home.

Foster care placements are unfortunately often serial events, and children in care often move among different foster care placements as well as other types of living situations in an attempt to deal with psychological and behavioral issues arising from the nature of the circumstances surrounding the child's placement. Some of these other placement types are designed to be therapeutic in nature, generally involving group or congregate care with higher levels of restrictiveness, such as group homes or residential treatment centers, with the intent that the child return to a less restrictive setting such as family foster care ideally permanently. Some settings are designed to be short-term breaks or temporary way stations while more permanent placements are found. Some placements are attempts to establish permanency, including not only returns home but also adoption and legal guardianship. Further reflecting the instability of youth in foster care, placements can also be disrupted by runaway incidents. While the focus in the current paper is on family foster care placements—those placements intended to be long term while the child awaits either family reunification, adoption , guardianship, or, if a more permanent arrangement has been determined to be impossible or unlikely, emancipation to independent living (often soon after age 18)—these other types of placements were incorporated into the analysis to test how different experiences of disruption are associated with shorter or longer family foster care placements.

## Data and Analytical Plan

The data for this analysis came from the Northwest Foster Care Alumni Study, an investigation of long-term foster care in Washington and Oregon as implemented by state agencies and a private operating foundation with offices in both states. The Alumni Study focused on adults who had been in foster care for at least one continuous year between the ages of 14 and 18 between 1988 and 1998. As the current analysis concerned only data from while they were in care, the sample members will henceforth be referred to as youth. Further information about the study and the variables used is available in Kessler et

al. (2008), Pecora et al. (2009) and at http://www.casey.org/resources/initiatives/FosterCareAlumniStudies.

The Alumni Study sample, built to reflect the long-term nature of services at the private agency and create a quasi-experimental comparison with a similar state sample, is not representative of all foster care. Although, as discussed, substantial numbers of foster children spend multiple years in care, the prototypical foster child is in care for only a brief period while her or his parents receive services. Among children in foster care as of 30 September 2006, 42% had been in their current spell of foster care for less than one year (DHHS, 2008). In contrast, the average length of time in foster care across all spells (that is, disregarding returns home or other intervening case closures) in the Alumni Study was 8.4 years for the private agency and 6.5 years in the public agency in Oregon and 9.8 versus 7.3, respectively, in Washington (Kessler et al., 2008). Furthermore, services at the private agency were primarily intended for youth who would not be returning home and for whom the prospect of adoption, relatively rare among adolescents, appeared slim. The study sample was built to reflect the nature of the private agency sample, with the assumption being that sample members were effectively in long-term foster care as opposed to the usual short-term care intended for those who will return home or be adopted. In addition to the longer stays in care, this means that the current sample, focused on adolescents, does not reflect the larger foster care population in terms of age or chances of returning to the birth home or being adopted. For example, the average age upon exiting care in this sample was 18.5 (Pecora et al., 2006), versus an average age of 9.8 years among children leaving care in 2006 (DHHS, 2008).

In this exploratory analysis, the choice was made to deal with the serial nature of the events by concentrating on foster care placements and factors related to the disruption of these placements. The unit of analysis is thus individual foster care placements. Every placement in the analysis ends at some point. For most placements, this end point was considered a disruption in a placement at least theoretically intended to have been permanent. In the model used here, placements not so intended—those that ended with the child leaving foster care—were considered to be censored observations. The modeled events were thus disruptions resulting in the child moving on to another setting while still under the care of the foster care agency.

Many of the observations were obviously clustered within individuals. In this analysis, attempt was made to account for some of this clustering through a series of covariates. Some covariates were designed to control for different background characteristics that may promote shorter placement length, such as maltreatment history, physical conditions, how long the child has been in care previously, and previous levels of disruption. For example, previous research indicates that children placed in care at a younger age tend to experience more stability in care than children removed from their homes at an older age (Zinn, DeCoursey, Goerge, & Courtney, 2006). In contrast, a longer time in care may result in increased risk of placement disruption for some adolescents in care. It may be that the hazard of placement disruption increases the more chaotic the youth's previous placement history. In addition, it is hypothesized that placement types will have a differential effect, with more restrictive placements (group care) and runaways being more indicative of socioemotional instability and thus increased hazard of placement disruption. For example, a qualitative study of reasons foster parents gave for why they might end a placement cited youth behavior and emotional problems as prominent (Brown & Bednar, 2006). Some covariates may promote longer placement, such as whether it is a kinship care placement (an authorized placement with relatives as opposed to non-related foster parents) or a return to a

previous and thus more familiar foster family. Previous work has found that kinship placement is associated with lower risk of disruption of an initial placement compared to those initially placed in non-kin family foster care, but no effect of kinship care on whether a child experienced 3 or more placements within a year of entering care was found (Koh & Testa, 2008). Finally, some covariates control for differences in the timing and experience of maltreatment and birth family disruption and officially noted reasons for placement in foster care that may signal important differences in birth family functioning and interactions with the child welfare system.

All data for the current analysis were drawn from child welfare system records, and were thus available for all 659 members of the Alumni Study sample. Covariates describing the youth before entering care as well as those describing the youth's placement history as of the beginning of the placement were included. The covariates are described below:

- Demographics:
    - Gender
    - Ethnicity indicators accounting for whether the youth was Caucasian, Asian or Pacific Islander, Hispanic/Latino, African or African American, Native American, or other
- Physical health issues:
    - Impairment or disability: visual, hearing, or physical disability
    - Birth complications: fetal alcohol or drug exposure or low birth weight
- Standard categories of maltreatment:
    - Sexual abuse
    - Emotional maltreatment
    - Physical neglect
    - Physical abuse
- Timing of maltreatment and entry into placement:
    - Age at case opening (usually the first official report of maltreatment)
    - Time between child welfare case opening and first placement (longer time may indicate lower level maltreatment and birth family interactions with family preservation services, whereas shorter time may indicate more severe maltreatment resulting in instant removal of child)
- Reasons for placement noted in case file:
    - Child maltreatment
    - Child behavior problems

    - Parental substance use
    - Other
- Private or public foster care agency
- Placement history as of beginning of current placement:
    - Number of placements and proportion of total placement log spent in family foster care
    - Number of placements and proportion of total placement log spent in group care, including group homes, residential treatment centers, psychiatric hospitals, and correctional facilities
    - Number of and proportion of total placement log spent in permanency attempts, including birth family placements, adoptions, and guardianships
    - Number of and proportion of total placement log spent in runaway incidents
    - Number of and proportion of total placement log spent in other settings, including respite care, shelter care, emergency/transitional placements, etc.
    - Total time since first placement
- Descriptors of current family foster care placement:
    - Kinship care
    - Return to a previous foster family

The unit of analysis was the length of foster care placements, including normal family foster care, kinship care, and treatment foster care (an intervention involving more highly trained foster families with more support than normal family foster care). Placement lengths were measured in days. The placement logs were converted into person-episode data, which allowed calculation of the variables describing the placement history as of the beginning of the index living situation. Note that while these variables change over time, they are not time varying covariates in the current analysis because they do not change *within* the individual episode that is the unit of analysis. As the focus was on family foster care placements, only these placements, with the accompanying covariate information, were extracted into the analysis data set. This resulted in 2,361 person-placement observations. Placements that began after the youth turned 18 were not included in the analysis data set because such placements are outside the usual practice in foster care and would not be expected to last long. Family foster care placements that were the individual's last placement before case closure or placements that ended after the youth turned 18 were considered as censored for the purposes of the event history analysis. Such placements are essentially considered "successes" in the current analysis, although some of them may not have been very long. All other placements—that is, those that did not end in emancipation or some other form of permanency—were considered to have experienced the event of interest, unintended placement disruption.

There is little guidance in the literature as to the appropriate parametric model for foster care placement length. Koh and Testa (2008) fitted a Weibull model but gave no justification for choosing a Wiebull over other distributions (beyond the exponential), and did not do any model comparison. Rather than test parametric models, the current analysis used a Cox proportional hazards model to explore the relationship between covariates and length of foster care placement. This analysis was conducted using the program MLE (http://faculty.washington.edu/djholman/mle/index.html).

## Analysis

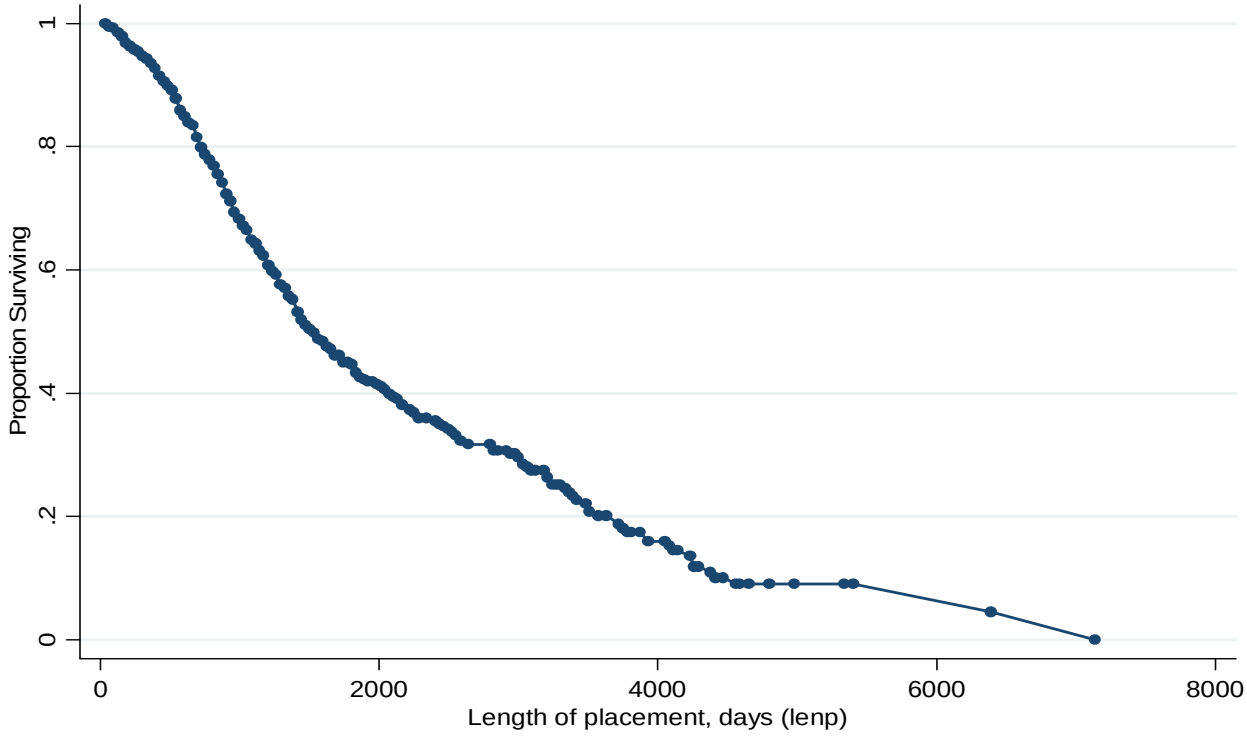
The private agency served 23.5% of the sample last (more than 90% of these youth transferred from state care [Kessler et al., 2008]). Further information about the individual cases appears in Table 1. Among individual cases, the average length of all counted official placements (excluding runaways, unlicensed relative care, respite care, returns home, etc.) was 32.7 months for the private agency subsample and 13.3 months in the public agency in Oregon and 26.4 versus 19.2, respectively, in Washington (Kessler et al., 2008). Among the foster care placements considered in the current analysis, the average length was 495.4 days (SD = 731.5), or approximately 16.3 months. In 18.7% of these placements, the family was related to the foster youth (kinship care), while 17.7% of the placements were returns to a previous foster family. Most of these placements were followed by other placements, while 17.1% of the placements were either final placements or ended after the youth turned 18 (censored). The overall distribution of placement lengths appears below in Figure 1 (note that censored observations are not differentiated from "true" failures in this figure, produced by Stata 10).

Table 1: Case-level descriptive statistics

| Descriptor | Proportion of sample | Descriptor | Mean (SD) |
|---|---|---|---|
| Female | 60.5% | Age at case opening, years | 9.65 (4.56) |
| Caucasian | 70.0% | | |
| Hispanic/Latino | 6.4% | Time between case open & first placement, years | 1.46 (2.39) |
| African, African American | 23.2% | | |
| Asian, Pacific Islander | 6.5% | Total number of settings noted in placement log[a] | 8.66 (6.59) |
| Native American | 9.0% | | |
| Other ethnicity | 0.5% | | |
| Physical disability/impairment | 5.3% | | |
| Birth complications | 4.2% | | |
| Experienced maltreatment | 93.3% | | |
| Sexual abuse | 53.6% | | |
| Emotional abuse | 84.5% | | |
| Physical neglect | 67.4% | | |
| Physical abuse | 64.6% | | |
| Placed due to child maltreatment | 64.3% | | |
| Placed due to behavior problems | 19.6% | | |
| Placed due to parental substance use | 28.5% | | |
| Placed due to other reasons | 49.2% | | |

[a]Note that not all settings recorded in placement log are officially considered to be "placements", but the term is used inclusively here.

Figure 1: Survival function estimate, 30 day intervals

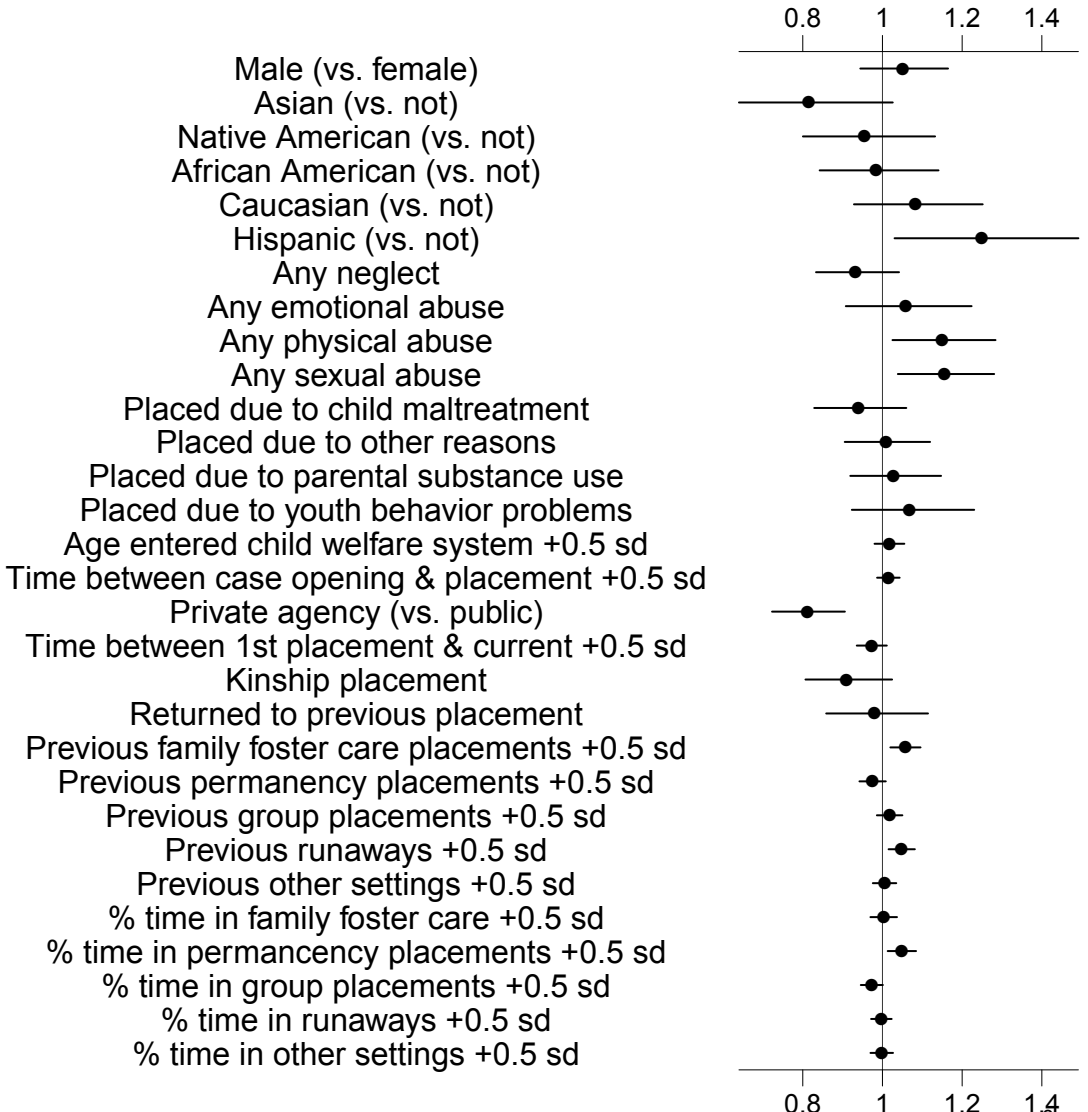



*Full Cox model results*

In this model, all the covariates discussed above were included. The log-likelihood for the full model was -13535.61, and the Akaike Information Criterion (AIC) was 27137.225. Although there were a large number of predictors in the model, the standard errors do not appear to be overly large—the largest (0.37) was for other ethnicity, which had a very low base rate. The effects of predictors on the hazard of placement disruption, net of the other variables in the model, are presented in Figure 2, while the parameter estimates and t-values are presented in Table 2.

Figure 2 shows the predicted hazard ratios for changing dichotomous (moving from “no” to “yes”) and continuous (adding half a standard deviation) predictors (except for three dichotomous control variables with base rates of less than 6%). The strongest effect appears to be for Hispanic origin (although the estimation of this effect is relatively imprecise due to the low proportion of Latinos in the sample). Youth noted in the case file to be of Hispanic or Latino descent had an increased hazard of disruption, with a 24.2% higher risk of disruption than non-Hispanic youth. A history of sexual abuse and a history of physical abuse were each independently associated with higher hazard of disruption. Youth with any experience of sexual abuse had a hazard ratio of 1.153, or a 15.3% higher risk of disruption than youth who had not been sexually abused. The hazard ratio for a history of physical abuse was 1.148. Placements associated with the private agency exhibited a significantly lower disruption risk (hazard ratio of 0.810) than those associated with the public agencies. Three of the measures of prior placement instability were positively related to the risk of disruption of the current placement, controlling for the other variables in the model. One additional previous family foster care placement before the current one was associated with a hazard ratio of 1.048, or a 4.8% higher risk of disruption. A youth with 10 previous family care placements compared to a youth with but 1 had a 52.9% higher risk of disruption. Similarly, more recorded runaway incidents was associated with shorter time until disruption of the

Figure 2: Hazard ratios and 95% confidence intervals for simulated change in predictors, holding all other variables in the full model constant




Note: +0.5 sd indicates simulated increase of one-half standard deviation in that predictor. Other predictors involve dichotomous changes (i.e. 0 to 1).

current family care placement. Youth with 2 previous runaway incidents had a hazard ratio of 1.081 compared to youth with 1 previous runaway, while youth with 10 previous runaways had a risk of disruption 100.8% higher. Finally, the proportion of the previous time since the first placement spent in reunification attempts, such as returns home, was significantly associated with higher hazard of disruption of the current family foster care placement. For each additional 1%, the hazard ratio was 1.003. Compared to youth with 1% of the time since the beginning of their first placement spent in a reunification attempt, youth with 10% of the time in such settings had a risk of disruption 3.2% higher. More time spent back with the family of origin or in adoption or guardianship attempts was significantly associated with shorter durations of the current family foster care placement, holding the other variables, including total time since the first recorded placement, constant.

Table 2: Parameter estimates for full model

| Covariates describing individuals | Beta estimate | t | Covariates describing placement history or current placement | Beta estimate | t |
|---|---|---|---|---|---|
| Female | 0.049 | 0.93 | *Number of previous:* | | |
| Caucasian | 0.075 | 0.99 | family foster care placements | 0.047* | 3.06 |
| Hispanic/Latino | 0.217* | 2.28 | group care placements | 0.026 | 1.08 |
| African, African American | -0.020 | -0.26 | permanency attempts | -0.049 | -1.48 |
| Asian, Pacific Islander | -0.215 | -1.76 | runaways | 0.077* | 2.89 |
| Native American | -0.052 | -0.59 | other settings | 0.005 | 0.35 |
| Other ethnicity | 0.149 | 0.40 | *Proportion of previous time since first placement spent in:* | | |
| Physical disability/ impairment | -0.099 | -0.88 | family foster care placements | 0.015 | 0.18 |
| Birth complications | -0.056 | -0.53 | group care placements | -0.355 | -1.92 |
| Sexual abuse | 0.143* | 2.66 | permanency attempts | 0.346* | 2.70 |
| Emotional abuse | 0.054 | 0.71 | runaways | -0.056 | -0.20 |
| Physical neglect | -0.072 | -1.25 | other settings | -0.011 | -0.12 |
| Physical abuse | 0.138* | 2.41 | Total time since first placement, days | -0.00004 | -1.37 |
| Age at case opening, years | 0.007 | 0.91 | | | |
| Time between case open & first placement, years | 0.013 | 1.01 | Current placement is kinship care | -0.098 | -1.61 |
| Placed due to child maltreatment | -0.065 | -1.03 | Current placement is return to previous foster family | -0.023 | -0.35 |
| Placed due to behavior problems | 0.063 | 0.87 | | | |
| Placed due to parental substance use | 0.025 | 0.44 | | | |
| Placed due to other reasons | 0.007 | 0.13 | | | |
| Private agency | -0.211* | -3.64 | | | |

* p<.05, based on critical value of 1.96

*Testing the effect of previous instability*

To investigate whether indicators of previous placement instability add significantly to the prediction of the hazard of foster placement disruption, a second model removing the number and proportion of time spent in various placement types was run. The pattern of coefficient estimates was largely the same as in the full model, with the notable change of Asian ethnicity now being significantly associated with lower disruption risk. Put another way, any effect of Asian ethnicity on the likelihood of placement disruption appears to be explained by prior placement history. Without the indicators of prior placement stability or chaos, the log likelihood was -13558.93 and the AIC 27163.865. The higher AIC indicates that the full model is preferred over the model without the placement instability descriptors. The indicators of previous instability significantly strengthen the hazard model.

## Conclusions

This exploratory analysis sought to investigate factors associated with shorter versus longer time to disruption of family foster care placements. Being Hispanic or Latino, experiencing sexual abuse, experiencing physical abuse, having more previous family foster care placements, having more previous recorded runaway episodes, and spending more of the time since the first recorded removal from the birth family in reunification attempts were each independently associated with higher hazard or shorter time until disruption of the current family foster care placement. In keeping with the quasi-experiment from which these data were drawn, agency was a significant predictor of the hazard of placement disruption. Placements associated with the private agency had a significantly lower risk of disruption than those in the public agencies. It should be noted that while the current analysis included the same control variables used to account for preexisting agency differences in previous Alumni Studies reports (Kessler et al., 2008; Pecora et al., 2009; Zerbe et al., 2009), it did not weight the samples to account for agency differences in pre-treatment variables, and thus may not be as consistent a test of agency differences as reported elsewhere.

This analysis suggests other areas of focus for addressing placement disruption. The significant differences between Hispanics and non-Hispanics indicates the need to further investigate why such youth are more likely to experience placement disruption and perhaps reach out to the Hispanic community to recruit foster parents. The findings regarding the effect of sexual and physical abuse are consistent with previous literature on abuse sequelae as well as on-going attempts to address the effects of abuse within foster care programs.

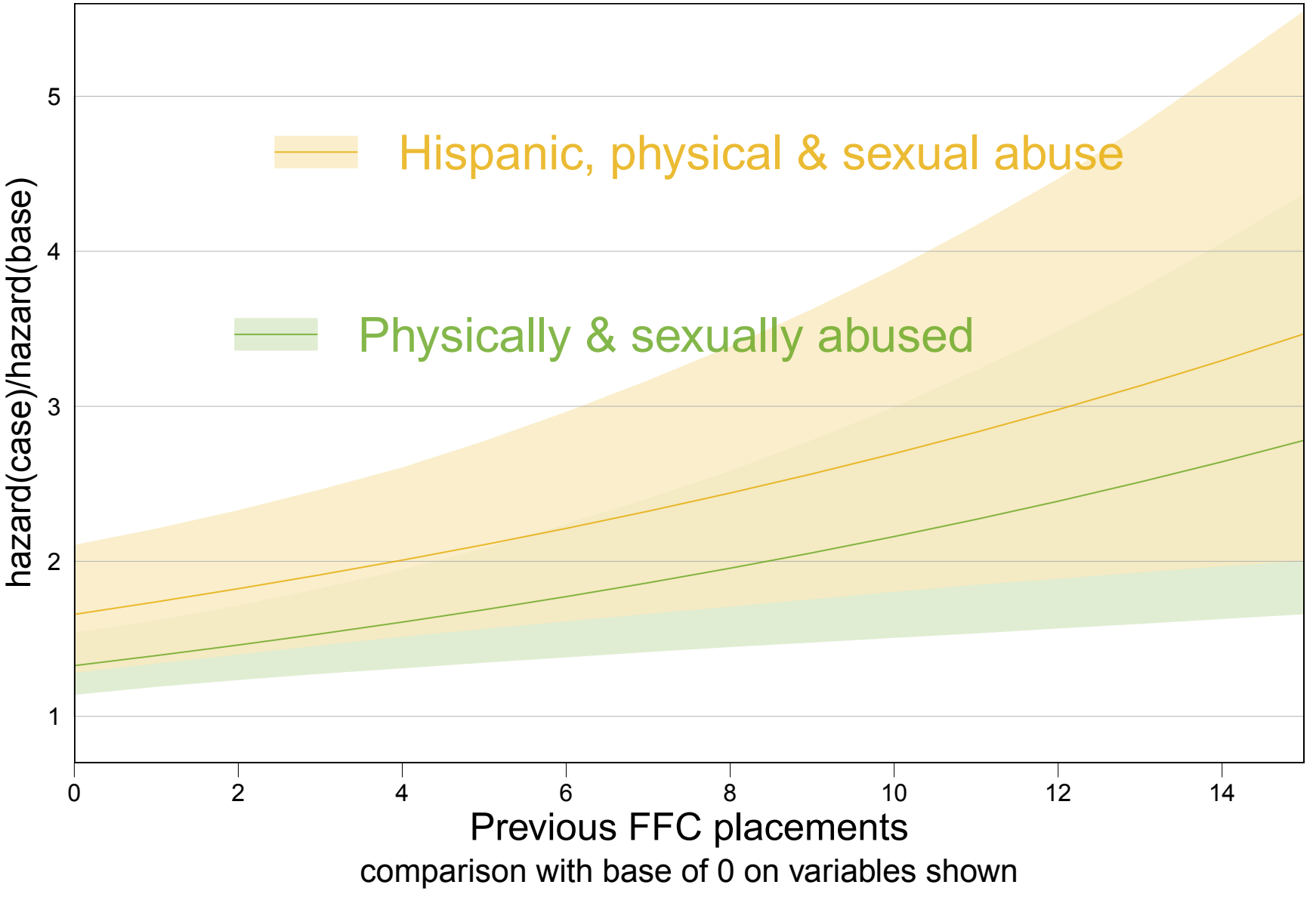
The current results appear to be unique in testing the joint as well as individual effect of indicators of previous placement chaos on current placement stability. The number of previous living situations of different types and the proportion of time since the first placement spent in each type of situation significantly affected the hazard of placement disruption. Jointly, these variables represent previous disruption and likely different associated but unmeasured factors related to prior placement instability. In contrast, the length of time in care prior to the current placement was not a significant predictor of stability, indicating that any effect of longer time in care on placement disruption is likely because of prior instability. Previous disruptions, particularly as represented by leaving family foster care placements, prior failed reunification attempts, and runaway episodes, appear to have a cascading effect on the chances of the youth finding stability in the current foster care placement. The results add to previous literature about the pernicious effects of failed reunification attempts, suggesting greater

caution before returning a foster youth to his or her birth family or establishing adoption or guardianship. It should be noted that the placements recorded as adoption or guardianship in this study may have been so-called pre-adoption, fost-adopt, or pre-guardianship placements. Nonetheless, this analysis suggests that, unfortunately, moving a foster child towards permanence may have negative as well as positive effects in terms of future placement stability if the child comes back into foster care. Similarly, poor matching of child to foster home appears to increase the risk of future disruption after the child has moved on to a different home.

A single foster child may unfortunately experience more than one of the risk factors described. Figure 3 presents two potential profiles adding the effects (hazard ratios with overlapping 95% confidence intervals) of being Hispanic and experiencing physical and sexual abuse along with the effect of prior number of family foster care placements. For a child who has experienced physical and sexual abuse, this simulation predicts the risk of disruption to be more than 100% higher if there have been 9 previous foster care placements versus if this is the first placement. If the child is also Hispanic, the predicted risk is doubled if there have been 4 prior placements. Previous instability begets future instability of placement. There are no easy fixes to the problem of foster care placement disruption, given the complexities of each individual case.

Other analyses of this or similar data may make different analytical decisions. Certainly the clustering of observations within individuals may be seen as a weakness of this analysis, not completely accounted for by the individual-level covariates included in the model. The current model also did not account for the fact that some of the placements associated with the private agency actually took place when the child was under the care of a public agency. The difference in hazards between the two may thus be seen as conservative. Other analysts may also wish to account for unobserved heterogeneity by adding a heterogeneity function to the likelihood estimated in the event history analysis. Some limitations in the underlying data provide further weaknesses in the current analysis. For example, the analysis could not account for maltreatment suffered in the current placement, and indeed the assumption was made here that the maltreatment reflected in the indicator variables used occurred before any of the included foster care placements, in keeping with other analyses based on this same data (e.g., Kessler et al., 2008; Pecora et al., 2006, 2009; Zerbe et al., 2009). This data and this analysis represent only one way to examine placement change. Other datasets that include variables such as foster parent perceptions of the child's behavior or complex health needs, or foster parent relationships with the foster care agency (see, for example, Brown & Bednar, 2006) would obviously come to different conclusions. Furthermore, the current analysis conservatively assumed that any foster care placement ending after the youth turned 18 ended due to policy reasons rather than being a premature disruption (i.e. the event under consideration). While most foster care ends when the youth turns 18 or completes high school, whichever is later, and this was more likely during the time period studied, some youth in this sample stayed in care well past 18, particularly in the private agency sample. Foster care placements that began after the youth turned 18 were similarly removed from the sample. The analysis does not address differences in permanently leaving care due to adoption, as this was not a focus of this study of long-term foster care. Thus, the conclusions about permanency attempts above apply only in cases where these attempts have failed and been followed by more foster care.

Figure 3: Hazard ratios for effect of number of previous family foster care placements for two different youth profiles



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