Risk Factors for Child Neglect among Families in Poverty
Kierra M.P. Sattler

In 2016, 14 million children or about 19% of all American children under 18 years old lived in poverty and an additional 29.8 million children lived in near-poor households (Koball & Jiang, 2018). This is particularly concerning because children living in poverty are more likely to have worse behavioral, cognitive, and health outcomes compared to their more affluent peers (Berger et al., 2009). Children living in poverty are also more likely to experience substandard parenting (Berger, 2007). According to the Family Stress Model, as economic hardship increases, parents are more likely to engage in harsh, inconsistent, and uninvolved parenting behaviors (Conger et al., 2010). Material hardship also uniquely contributes to increased parental stress and decreased parent investment and positive parenting (Gershoff et al., 2007). Therefore, in order to promote child well-being among families in poverty, it is essential to further explore the mechanisms by which poverty influences parenting behaviors.

Poverty more strongly associated with neglect than with other forms of maltreatment (Proctor & Dubowitz, 2014). Children in low socioeconomic households are nearly seven times more likely to be neglected than children who live in more affluent households (Sedlak et al., 2010). Although caseworkers are instructed to exclude poverty as a sole reason for neglect, many factors associated with poverty also increase the risk of neglect, such as unemployment, single parent status, or residential instability (Koball & Jiang, 2018; Slack et al., 2011). For example, many families in poverty experience material hardship; it is only when these hardships reach the level of deprivation that they would be considered neglect. Most children who live in poverty are not neglected, which indicates that some parents are better able to provide suitable care despite limited resources (Slack, Holl, McDaniel, Yoo, & Bolger, 2004). Thus, identifying which families in poverty are most likely to neglect their children is an important and necessary step for preventing neglect.

Risk Factors for Neglect

Neglect, as with other adverse experiences, is unlikely to be the product of a single risk factor; rather, previous research has shown that the accumulation of multiple risks is most predictive of negative outcomes (Sameroff, 2006). Several studies have demonstrated that specific risk factors increase the likelihood of neglect, including caregivers' depressive symptoms and parenting stress (Stith et al., 2009; Slack et al., 2011). There are different theoretical approaches as to whether the number (Sameroff, 2006), the type (Slack et al., 2011), or the configuration (Roy & Raver, 2014) of risk factors is most important when predicting maladaptive outcomes. In this study, I will focus on configuration of six risk factors that commonly occur among families in poverty: maternal depressive symptoms, maternal education, parenting stress, residential instability, material hardship, and caregiver health issues. Each of these risk factors has been shown to be predictive of maltreatment generally (i.e. the specific type of risk factor is predictive of maltreatment), but an exploration of the configuration of risk factors will provide insight into how these risk factors are likely to occur together and how these configurations matter for neglectful parenting.

The Current Study

Poverty is an important predictor of neglectful parenting, yet not all families in poverty share the same level of risk for maltreatment. Therefore, it is important to understanding how risk factors tend to co-occur among families in poverty and how families' risk profiles change across time in order to identify families most likely to engage in neglectful parenting.

Additionally, prior research has rarely focused on differentiating predictors of neglect, as opposed to maltreatment generally, and even fewer studies have explored different types of neglect. This study aims to move the field forward by investigating three research questions: 1) How do risks for neglect co-occur among families in poverty at two different time points during early childhood?; 2) How are risk profiles across early childhood among families in poverty related to neglectful parenting behaviors (physical and supervisory neglect) and CPS involvement for neglect?; 3) How do families move between risk profiles across early childhood and how does this predict neglectful parenting behaviors (physical and supervisory neglect) and CPS involvement for neglect?

Method

Data and Sample

The Fragile Families and Child Wellbeing Study (Fragile Families) is a longitudinal, national survey of children born between 1998 and 2000 in twenty U.S. cities with over 200,000 residents. The study oversampled for non-marital births, which resulted in a large proportion of participants being economically disadvantaged. Almost 5,000 families were interviewed at birth and data collection occurred at years 1, 3, 5, 9, and 15. Data were collected from surveys completed by mothers, fathers, primary caregivers, child care providers, teachers, and children. Direct observational assessments of the family members were also conducted. The sample will be limited to families that lived within 200% of the poverty threshold at baseline and that participated in the 5-year in-home assessments ($n = 1,883$; Table 1).

Measures

Maternal depressive symptoms. Maternal depressive symptoms was measured using the Composite International Diagnostic Interview-Short Form (Kessler et al., 1998) at years 1 and 3. If mothers endorsed having two weeks of either dysphoric mood (dissatisfaction with life) or anhedonia (inability to feel pleasure) for at least half a day and almost every day, they were asked seven more questions. Depressive symptoms will be the sum of the seven items and higher scores will indicate more depressive symptoms.

Low maternal education. At baseline mothers reported on their highest completed education and at years 1 and 3 mothers reported on whether they had completed additional schooling. Low education will be coded as (1) high school diploma/ GED or lower and (0) more than a high school diploma at years 1 and 3.

Parenting stress. At years 1 and 3, mothers rated their parenting stress using the Parent Stress Inventory (e.g. "Being a parent is harder than I thought it would be") using a 4-point scale, from (1) strongly agree to (4) strongly disagree (Abidin, 1995). Four items were the same across waves ("Being a parent is harder than I thought it would be", "I feel trapped by my responsibilities as a parent", "I find that taking care of my child (ren) is much more work than pleasure", and "I often feel tired, worn out, or exhausted from raising a family"). These items will be averaged at each wave, with higher scores will indicate more parenting stress.

Residential instability. Mothers reported on if, and if yes how many times, they had moved since the child's birth (year 1 survey) or first birthday (year 3 survey). The responses will be rescaled from 0 "No moves" to 10 "10 moves." More moves will represent more residential instability.

Material hardship. Mothers answered five questions about issues related to not having enough money in the past year; they are: "did you receive free food or meals?", "did you not pay the full amount of rent or mortgage payments?", "did you not pay the full amount of a gas, oil or electricity bill?", "did you borrow money from friends or family to help pay bills?", and "did you

move in with other people even for a little while because of financial problems?". Responses will be coded No (0) and Yes (1) and will be summed to create a cumulative score of material hardship with higher score indicating more hardship at years 1 and 3.

Maternal health problems. At years 1 and 3, mothers were asked "Do you have a serious health problem that limits the amount or kind of work you can do?" Responses will be coded as No (0) and Yes (1).

Neglectful behaviors. Using a strategy similar to that employed by Font and Berger (2015), I will separate neglectful behaviors into physical neglect and supervisory neglect based on mothers' responses to a questionnaire, interviewers' observations, and mothers' responses to items on the Parent-Child Conflict Tactics Scale (Straus, Hamby, Finkelhor, Moore, & Runyan, 1998) at year 3 and 5. *Physical neglect* will include measures of whether the child received necessary food, whether the utilities were shut off, whether the family was evicted, whether the child could not get necessary medical care, and interview observations of housing interior or safety issues and the child's hygiene. Supervisory neglect will include if the parent was too intoxicated to care for the child, if the caregiver left the child alone when they should not have, if the parents had a physical dispute in front of the child, if the parent used any hard drugs or non-prescribed drugs, or if the parent earns any income from illegal activities. For both physical neglect and supervisory neglect, each indicator will be dichotomized and summed to create these two scales with higher levels indicating higher neglect.

CPS involvement. In the year 5 in-home assessment, each mother reported if she had ever been contacted by CPS since the child was born, the date of the most recent contact, and the reason for contact. Based on the reported dates of contact, CPS contact will correspond to time spans between the birth and 3 year interviews (i.e., CPS involvement from birth until age 3) or between the 3 and 5 year interviews (i.e., CPS involvement from age 3 until age 5). Responses about the reason for CPS involvement were not mutually exclusive and included physical abuse, sexual abuse, neglect, or other. CPS involvement will be coded as three dichotomous variables: No contact, Contact by CPS for non-neglect reasons, and Contact by CPS specifically for neglect.

Covariates. Child-level covariates will include child's age, gender, low birthweight, and disability status. Family-level covariates will include mother's age, mother's age at first birth, race, marital status, nativity status, and household size. All covariates will be drawn from year 1 or, if unavailable, from the baseline interview.

Analytic Approach

All analyses will be conducted in Mplus 7.4 (Muthén, & Muthén, 2015) with a structural equation modeling (SEM) framework. I will use full information maximum likelihood estimation (FIML) to account for missing data.

RQ 1. How do risks for neglect co-occur among families in poverty at two different time points during early childhood? To model how risks for neglect occur among families in poverty, I will use Latent Profile Analysis (LPA). LPA uses indicators to cluster risk factors into different profiles that make up a categorical latent variable. I will compare each model with successively more complex models using the Bayesian Information Criterion (BIC), adjusted BIC (ABIC) and the Lo-Mendell-Rubin Adjusted Likelihood Ratio Test (LMR-LRT) to determine the number of classes that best fit of the model to the data (Nylund, Asparouhov, & Muthén, 2007). A better fitting model would result in a decreased BIC and ABIC and an LMR-LRT *p-value* below 0.05 when comparing K classes versus K-1 classes (i.e., the second model would be a significant improvement from the first model). Additionally, classes need to contain

at least 5% of the sample (a minimum of 1% is recommended by Jung & Wickrama, 2008). In conjunction with comparing these fit statistics, I will also determine model fit based on a line graph of the BIC and ABIC values and assessing for where the values leveled off. LPA will be conducted separately for risk factors at year 1 and year 3.

        RQ 2. How are risk profiles across early childhood among families in poverty related to neglectful parenting behaviors (physical and supervisory neglect) and CPS involvement for neglect? To investigate how risk factors across early childhood relate to neglectful parenting and CPS involvement for neglect, I will use multiple regressions in an SEM framework. The risk profiles will be determined in the prior analyses and used for these analyses. I will regress neglect at year 3 (physical neglect, supervisory neglect, CPS involvement for neglect) on risk profiles at year 1 and in a separate model I will regress neglect at year 5 on risk profiles at year 3.

        RQ 3. How do families move between risk profiles across early childhood and how does this predict neglectful parenting behaviors (physical and supervisory neglect) and CPS involvement for neglect? I will use Latent Transition Analysis (LTA) combined with multiple regressions to examine how families move between risk profiles across early childhood and how this stability in profile membership is related to neglect. LTA estimates latent transition probabilities, in which the probability of latent profile membership at the next time point is conditional on the profile membership at the previous time point (Bray, Lanza, & Collins, 2010). LTA uses the same fit statistics as LPA, in which a decreased BIC and ABIC and an LMR-LRT *p-value* below 0.05 indicate a better fitting successive model. Using an SEM framework, I will regress both types of neglectful parenting and CPS involvement for neglect at year 5 on the latent transition probabilities from year 1 to year 3. These regressions will provide information about the association between stability and change in risk profile membership between year 1 and year 3 and parents' risk of neglecting behaviors at year 5.

<center>**Preliminary Results**</center>

        Descriptive statistics of the sample can be found in Table 1. Preliminary results can be found in Figures 1 and 2 and Tables 2 and 3.

Latent Profiles of Risk Factors across Early Childhood

        Preliminary latent profile analyses resulted in a four-class solution (see Figure 1). The first class is "Low-risk", with lower levels of maternal depressive symptoms, parenting stress, residential instability, material hardship, and average levels of low maternal education and maternal health issues. The second class is the "Stressed Out with Health Issues" and is characterized by higher levels of parenting stress and a higher likelihood of health issues, some depressive symptoms and material hardship, and average levels of residential instability and low maternal education. The third class is "High Depressive Symptoms with Low Stress" and includes high levels depressive symptoms, but low levels of parenting stress and moderate levels of residential instability, material hardship, low maternal education, and health issues. The fourth class is "High-risk" and includes extremely high levels of depressive symptoms with high levels of all other risk factors. These profiles were replicated almost exactly for year 3 (see Figure 2). One notable exception is the year one "High Depressive Symptoms with Low Stress" groups is slightly different at year 3 and called "High Depressive Symptoms with Low Health Issues" due to average levels of parenting stress, but lower levels of maternal health issues.

Profiles Predicting Neglectful Parenting Behaviors

        Preliminary regressions have suggested that class membership differentially predicts neglectful parenting (see Tables 2 and 3). At year 1, High-risk group engaged in significantly

more physical and supervisory neglectful parenting behaviors compared to the Low-risk group (β=0.11, p<.001; β=0.09, p<.001). At year 1 and compared to the Low-risk group, the Stressed Out with Health Issues group engaged in significantly more physical and supervisory neglectful parenting behaviors (β=0.06, p<.05; β=0.05, p<.05). At year 3, the High Depressive Symptoms with Low Health Issues and High-risk groups engaged in more physical neglectful parenting behaviors compared to the Low-risk group (β=0.05, p<.05; β=0.09, p<.001). The High-risk group also engaged in more supervisory neglectful parenting behaviors compared to the Low-risk group at year 3 (β=0.10, p<.001).

Further analyses will examine involvement with child protective services and research question 3.

References

Berger, L. M. (2007). Socioeconomic factors and substandard parenting. *Social Service Review*, *81*, 485-522.

Berger, L. M., Paxson, C., & Waldfogel, J. (2009). Income and child development. *Children and Youth Services Review*, *31*, 978–989. http://doi.org/10.1016/j.childyouth.2009.04.013

Conger, R. D., Conger, K. J., & Martin, M. J. (2010). Socioeconomic status, family processes, and individual development. *Journal of Marriage and Family*, *72*, 685-704.

Gershoff, E. T., Aber, J. L., Raver, C. C., & Lennon, M. C. (2007). Income is not enough: Incorporating material hardship into models of income associations with parenting and child development. *Child Development*, *78*, 70-95.

Koball, H., & Jiang, Y. (2018). Basic Facts about Low-Income Children: Children under 9 Years, 2016. New York: National Center for Children in Poverty, Columbia University Mailman School of Public Health.

Roy, A. L., & Raver, C. C. (2014). Are all risks equal? Early experiences of poverty-related risk and children's functioning. *Journal of Family Psychology*, *28*, 391.

Sameroff, A. (2006). Identifying risk and protective factors for healthy child development. In A. Clark-Stewart & J. Dunn (Eds.), *Families count: Effects on child and adolescent development* (pp. 53–76). Cambridge: Cambridge University Press.

Sedlak, A.J., Mettenburg, J., Basena, M., Petta, I., McPherson, K., Greene, A., and Li, S. (2010). *Fourth National Incidence Study of Child Abuse and Neglect (NIS–4): Report to Congress, Executive Summary.* Washington, DC: U.S. Department of Health and Human Services, Administration for Children and Families.

Slack, K. S., Berger, L. M., DuMont, K., Yang, M. Y., Kim, B., Ehrhard-Dietzel, S., & Holl, J. L. (2011). Risk and protective factors for child neglect during early childhood: A cross-study comparison. *Children and Youth Services Review*, *33*, 1354-1363.

Slack, K. S., Font, S., Maguire-Jack, K., & Berger, L. M. (2017). Predicting child protective services (CPS) involvement among low-income US families with young children receiving nutritional assistance. *International Journal of Environmental Research and Public Health*, *14*, 1197. doi:10.3390/ijerph14101197

Stith, S. M., Liu, T., Davies, L. C., Boykin, E. L., Alder, M. C., Harris, J. M., ... & Dees, J. E. M. E. G. (2009). Risk factors in child maltreatment: A meta-analytic review of the literature. *Aggression and Violent Behavior*, *14*, 13-29.

Table 1. Descriptive Statistics of Covariates

	In sample N=1,883	Not in sample N=3,014	Significance of difference
Child Characteristics			
Age (months) at year 1	15.24 (3.57)	14.87 (3.40)	
Male	0.52	0.53	
Low birth weight	0.11	0.10	
Disability status	0.03	0.02	
Household Characteristics			
Mother's age	25.18 (5.52)	27.29 (6.25)	***
Mother's age at first birth	19.86 (4.01)	22.74 (5.66)	***
Race			
White	0.12	0.27	
Black	0.59	0.41	
Hispanic	0.28	0.27	
Other race	0.02	0.05	***
Mother married	0.16	0.41	***
Mother nativity status	0.87	0.80	
Household size	2.84 (2.53)	2.68 (2.32)	

*Note. * $p < .05$; ** $p < .01$; *** $p < .001$.*

Table 2. Year 1 Profiles Predicting Neglectful Parenting Behaviors

	Physical Neglect		Supervisory Neglect	
	β	p	β	p
Stressed Out with Health Issues	0.06	*	0.05	*
High Depressive Symptoms with Low Stress	-0.01		0.03	
High-risk	0.11	***	0.09	***

*Notes. * $p < .05$; *** $p < .001$.*

Table 3. Year 3 Profiles Predicting Neglectful Parenting Behaviors

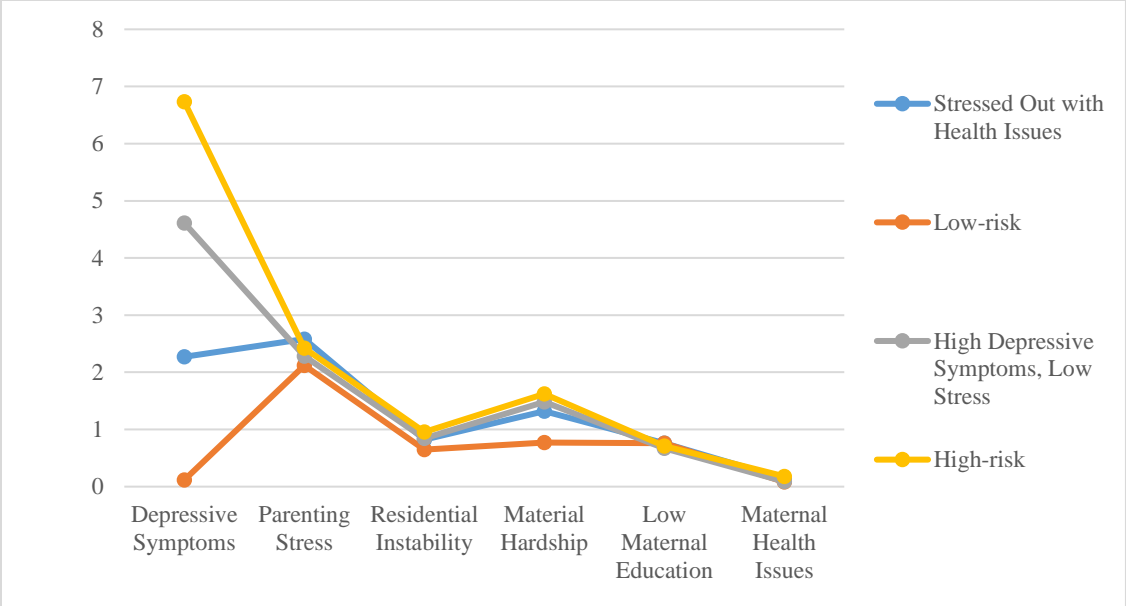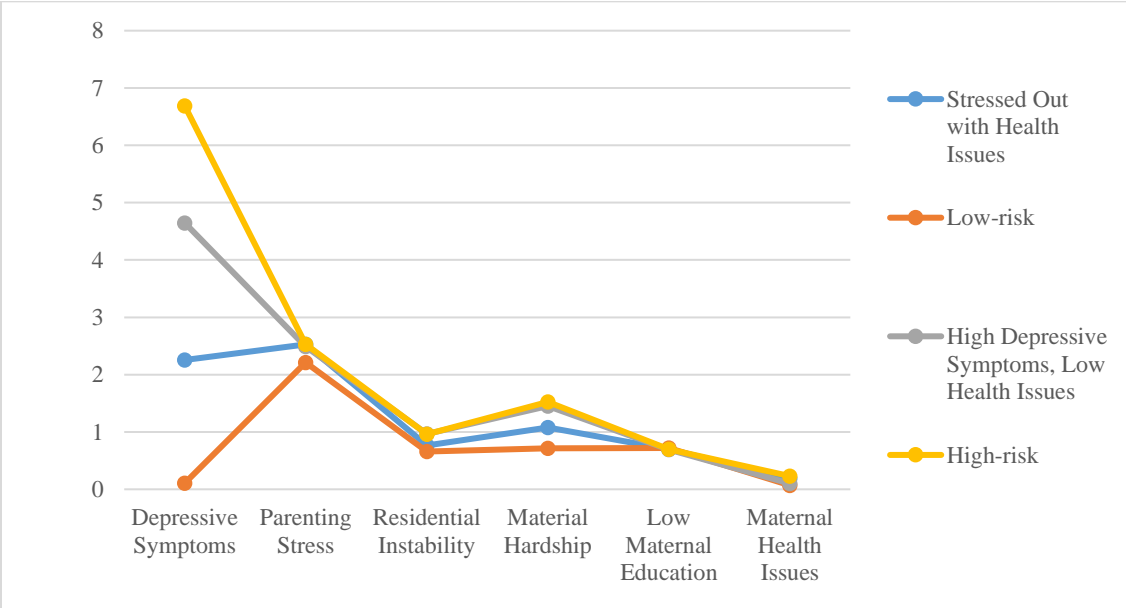|	Physical Neglect		Supervisory Neglect	
	β	p	β	p
Stressed Out with Health Issues	-0.01		0.01	
High Depressive Symptoms with Low Health Issues	0.05	*	0.02	
High-risk	0.09	***	0.1	***

*Notes. * $p < .05$; *** $p < .001$.*

Figure 1. Risk Profiles at Year 1

Figure 2. Risk Profiles at Year 3