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## The Impact of Psychosocial Risk on Infant Attachment

This study tested the hypothesis that cumulative psychosocial risk and attachment would be significantly related in a sample of low income, African American, preterm infants such that infants with higher levels of psychosocial risk would be more likely to have insecure attachments. Maternal resolution of having a preterm infant was also expected to function as an additional risk factor and to independently relate to attachment. Lastly, the potential moderating role of medical risk was explored.

The cumulative psychosocial risk model posits that the cumulative effect of multiple risk factors is more influential than the impact of any individual risk factor alone. Risk factors can be at both the global (poverty, level of social support) and the personal (maternal depression, maternal education) levels. Many individual risk factors have been related to child development. For example, maternal depression can negatively impact the parent-child relationship, living in poverty can lead to lower IQ scores and academic achievement, and maternal education has been linked to children's educational attainment. The cumulative psychosocial risk model goes beyond individual variables, and states that regardless of which specific variables are present, the more they are, the more risk the family faces. Prior studies have found that increased cumulative psychosocial risk was related to lower cognitive development scores at ages 4 and 13 years of age, depressed social-emotional development at 1 year of age and insecure infant-parent attachment.

Attachment represents a long lasting love relationship that is established through the repeated interactions between the parent and infant over time. The mother operates as a secure base from which the infant is free to explore the world and to which he or she retreats in times of need. Secure attachment is the optimal attachment status, with the infant feeling that he can depend on the caregiver in times of stress, and is free to explore the environment, using the caregiver as a secure base to return to. Insecure-avoidant children tend to explore the environment at the expense of seeking contact with their caregiver and in general tend to avoid contact. Insecure-ambivalent children seek proximity at the expense of exploring their environment. They do look to the caregiver in times of stress, but are not easily comforted. Unlike children with one of these three classifications, insecure-disorganized children do not display a regular pattern of behavior. The children exhibit confusing or bizarre behaviors such as disruptions in approaching the parent, stereotypies, stilling and simultaneously contradictory behavior. Securely attached infants have been found to have better long term outcomes including social skills and school achievement in childhood.

Premature infants are considered to be biologically at risk for developmental challenges. The biological and neurological consequences of prematurity have been linked to delays in cognitive and motor development. Furthermore, studies have found that cumulative psychosocial risk compounds the impact of biological risk on cognitive and motor outcomes in samples of premature infants. Hence, those premature infants faced with both biological and psychosocial risk have the worst outcomes. Premature infants have also been found to be more

difficult to parent due to their displaying less clear cues about needs, their increased sensitivity to stimuli, being more difficult to sooth, and other related behaviors. However, examinations of attachment in preterm infants have been inconclusive, with only some studies establishing that premature infants have higher rates of insecure infant-parent attachments. In addition, most studies examining attachment in preterm infants have not utilized a cumulative psychosocial risk model. Therefore, this study expands on past literature in the cumulative psychosocial risk, attachment and premature infant outcomes literature.

The study also explored how the degree to which mothers have resolved the trauma of having a preterm infant is related to security of attachment. Parents are thought to mourn the loss of the ideal child when they have a child born prematurely. Studies have found that parental resolution of a child's disability is related to security of attachment in samples of children with cerebral palsy and epilepsy, such that parents who had not achieved resolution regarding their child's disability were more likely to have children who were insecurely attached. This study attempted to determine if parental lack of resolution of having a preterm infant is a contributor to the cumulative psychosocial risk of a family. The independent role of resolution to having a preterm infant as a predictor of attachment was also examined.

The following hypotheses were made:

- 1) Increased cumulative psychosocial risk would relate to less secure infant-parent attachment.
- 2) Maternal non-resolution would increase the influence of cumulative psychosocial risk.
- 3) Maternal resolution would relate to secure attachment.
- 4) Biological risk would moderate the influence of cumulative psychosocial risk on attachment.

Hypotheses were not supported. A cumulative psychosocial risk index was not related to attachment. However, post-hoc analyses indicated that cumulative psychosocial risk did relate to attachment when cumulative psychosocial risk was dichotomized into high and low risk groups. This suggests that the attachment system can sustain minimal levels of stress (one risk factor), but higher levels of psychosocial stress (two or more risk factors) can lead to insecure attachments. A model examining individual risk factors was also supported and revealed that receiving public assistance predicted more variance alone than cumulative risk groups. Maternal resolution did not function as an additional risk factor either in the risk index or the risk groups. Nor did maternal resolution relate to attachment scores. Biological risk did not moderate the relation between cumulative psychosocial risk and attachment.

Results indicate that accumulated psychosocial stress can impact the attachment relationship between low income, African-American preterm infants and their mothers. However, against expectations, a single poverty indicator was more predictive. It is possible that for infant-parent attachment in a high risk sample, living in poverty is the most salient risk factor. An alternative possibility is that a different constellation of risk factors would be more suited to predicting attachment. This risk model was modeled after seminal studies relating cumulative risk to cognitive outcomes. Future research should explore the predictive ability of cumulative risk models more tailored to attachment outcomes specifically.

Interventions that target the attachment relationship, particularly for high risk infants, early on are needed. In addition, education for Neonatal Intensive Care Unit staff on how to identify and work with families in poverty and those with accumulated psychosocial stress is required. It is vital that these families be successfully identified and referred for supportive services.