



Research Roundtable Summary



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in a Series of Seminars

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Research Projects

Adolescent Mothering and Preschool Behavior Problems

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About This Series

The Research Roundtable Series is sponsored by the Maternal and Child Health Bureau (MCHB) and is intended to disseminate the results of MCHB-funded research to policymakers, researchers, and practitioners in the public and private sectors. The results of these projects influence future service, research, and policy development. The Research Roundtable sessions provide an opportunity for researchers to discuss their findings with policymakers, MCH program directors, service providers, and other health professionals.

The Maternal and Child Health Research Program is directed by Dr. Gontran Lamberty and administered through the Division of Systems, Education and Analysis, Maternal and Child Health Bureau, Health Resources and Services Administration (HRSA). HRSA is a component of the Public Health Service (PHS), U.S. Department of Health and Human Services (DHHS). The purpose of the program is to support applied research relating to maternal and child health services that shows promise of substantial contribution to the advancement of these services.

Introduction

Dr. Susan Spieker is a research associate professor in the Department of Parent and Child Nursing at the University of Washington. Reaction was provided by Dr. Gail Wasserman, associate clinical professor of medical psychology and psychiatry at the College of Physicians and Surgeons, Columbia University, and research scientist at the New York State Psychiatric Institute.

Presentation

Background and Context. This research study is part of the larger Early Parenting Project, which consists of three phases: (1) Attachment study, (2) preschool followup, and (3) school-age followup. The first phase, the attachment study, used a sample that was studied in infancy. The second phase, the focus of this roundtable, followed a subsample of the mothers and children from the attachment study who could be located 3 years later. The third phase focuses on the children in first, second, and third grade. Social contacts expand at this time, so the investigators observe in the classroom/school, enlist teachers as informed observers of children's behavior problems and social competencies, and perform school record searching.

Dr. Spieker began her presentation with general background on childhood behavior problems. Multivariate approaches to the classification of such problems consistently reveal two important, broad-based factors: Internalizing problems (syndromes characterized by anxiety, social

withdrawal, and/or depression) and externalizing problems (syndromes characterized by aggression, other “acting out” behaviors, and/or hyperactivity). Conduct problems such as noncompliance, oppositional behavior, aggression, and stealing are a subset of the externalizing behavior problems. Studies have shown that children of adolescent mothers are at greater risk for developing conduct problems than children of adult mothers, even after controlling for a variety of social and health factors.

Dr. Spieker explained that approximately 4 to 10 percent of children under 18 qualify as having a disruptive behavior disorder. Of those with behavior disorders, 9 percent of boys and 2 percent of girls have conduct problems, suggesting that being male is also a risk factor for acting out behavior problems. Although conduct disorders are rarely seen before age 6, precursors to such disorders may be found during early childhood development. One model of this type of developmental pathway, on which Dr. Spieker’s research focuses, is the “early starter” model.

“Early Starter” Developmental Pathway Model. This pathway is characterized by early onset of overt and covert behavior problems (beginning in the preschool or early school years) that become worse over time. Many of the children who follow this pathway experience conduct problems in adolescence and antisocial behavior in adulthood. Much research has focused on these children, but it remains incomplete for various reasons. First, most of the research has been cross-sectional, and the research that has been longitudinal focused on the short term. Second, much of the research has been conducted with older children (ages 10–14 years) rather than younger children (ages 3–10 years) for whom this model is most applicable. And finally, much of the research to date has focused on boys since they, as a group, tend to have more conduct problems.

The “early starter” pathway can be divided into four age group stages: Preschool, early school, middle childhood, and early adolescence. Risk factors for following this pathway include insecure attachment in infancy, difficult temperament or hyperactivity, and certain adverse family factors. Because of a child’s difficult temperament or because of parental disturbance, a troubled interaction is set up early in infancy, resulting in insecure attachment. As the child develops through the preschool years, the parent and child interact with negatively reinforced, coercive type behaviors (characterized by command giving) that feed into a continuing negative cycle.

By the time these children enter school, they have acquired a coercive style of interaction that becomes generalized as they interact in their school setting. These problems are a continuation of what started in the preschool years and are further compounded by the conflict over new and difficult encounters in school. Because of these difficulties, these children fail to acquire basic academic skills. As these children move on to middle childhood and middle school, they lack the basic social and academic skills to succeed. At this middle-childhood level, parents tend to express a great deal of distress and depression over their helplessness in managing their children’s behavior.

By early adolescence, these youth continue to exhibit poor academic performance. Peer rejection tends to stabilize, pushing the youth with conduct problems together into deviant peer groups, and parental monitoring becomes even less frequent. Taken together, these steps on the pathway become a prescription for delinquency and criminal and antisocial behavior.

Dr. Spieker’s current research focuses on the preschool years of this developmental pathway. The primary purpose of this research was to follow up a sample of adolescent mothers and their infants (now preschool age) who participated in an earlier phase of the study in order to examine the roles of parenting behavior, infant attachment security, and other maternal and child risk and protective factors in the development of behavior problems.

Findings from the attachment study. This phase of the study focused on the contribution of living arrangements and social support from the grandmother to predict the quality of adolescent mothering and infant attachment. Three outcomes (teaching interaction, quality of the home, and

attachment security) were examined, and the investigators found that both social support and living arrangements had the most effect upon these outcomes.

The study examined three living arrangements—with the grandmother, with the partner, or with neither of these. The effect of living arrangements on teaching interaction revealed that the adolescent mother's teaching interaction was better if she did not live with her mother. For quality-of-home outcome, the home scores were higher if the grandmother's support was high (as expected), and they were high if the adolescent mother lived with either her partner or her mother.

When the outcome was attachment security, interactions were found between both level of grandmother support and living arrangements. Infants were most likely to be securely attached if the adolescent mother lived with her partner and had a high level of grandmother support. Infants were least likely to be securely attached if the adolescent mother lived with her partner and had a low level of grandmother support—that is, if the adolescent mother had a low level of support from her own mother, her infant was more likely to be securely attached if she lived alone rather than with her partner. If, on the other hand, she had high grandmother support, she was more likely to have a securely attached infant if she lived with her partner rather than with her mother. These results suggest that grandmother support is not universally beneficial. Grandmother support, it appears, must be coupled with support that upholds the adolescent mother's move toward independence and toward assuming an adult role (high grandmother support could undermine the acquisition of parenting skills).

Preschool followup. As noted above, the second phase of the study, which was the focus of this roundtable, followed a subsample of mothers and children from the attachment study who could be located 3 years later. The children were assessed at two time points: 3 1/2 or 4 1/2 years of age (T1), and again at 4 1/2 or 5 1/2 years of age (T2). In the preschool years, the investigators focused mainly on the parent-child relationship and the development of the coercive parenting style. In this sample, which was primarily Caucasian, 73 percent of the mothers had completed high school or earned the GED, and nearly half were married.

To examine the parent-child relationship and coercive parenting style, the investigators measured parental attitudes and observed behavior directly in a 25-minute laboratory situation that combined child-directed play, mother-directed play, and cleanup. Based on the observations, parenting behavior and outcomes were coded. Specifically, the parenting behavior was coded for elements of the coercive style that the mother might have (that is, the number and type of commands she gave to the child).

Child behavior problems were measured in four different ways: (1) Achenbach's Child Behavior Checklist (CBCL), (2) playroom observation, (3) the Behar Preschool Behavior Questionnaire given to child care providers, and (4) *Diagnostic and Statistical Manual of Mental Disorders,* third edition, revised (DSM III-R) criteria for diagnosis of disruptive behavior disorder (this measure was possible only with the 40 children from the sample who were 5 1/2 years old by T2).

Findings from the preschool followup. Using the CBCL measurement at T1, twice as many of the children in the sample exceeded the clinical cutoff for externalizing problems as would be expected in a normal normative sample of children; at T2, one-and-a-half times as many children exceeded the cutoff. Twice as many of the children measured also exceeded the clinical cutoff in aggressive and delinquent behavior. In playroom observation, the clinical cutoff was defined as the mean of a clinic-referred sample for behavior problems. Nineteen percent of the sample at T1 and 16 percent at T2 exceeded the clinical cutoff for compliance. Nearly one-third of the sample exceeded the cutoff for inappropriate behavior. On the Behar questionnaire, 16 to 18 percent of the children exceeded the cutoff for conduct problems. In the diagnostic interview at 5 1/2 years of age, 13 percent

of the children had a diagnosis of attention deficit hyperactivity disorder, 10 percent had oppositional defiant disorder, and 5 percent had conduct disorder. Overall, 20 percent of the sample had at least one diagnosed disorder, a percentage two to four times greater than expected.

When the results of the conduct-problem outcome data are analyzed by gender, more boys and girls at T1 exceeded the cutoff on the aggressive behavior scale than would be expected in a normative sample; but, on the delinquent behavior scale, only more of the girls exceeded the cutoff than would be expected in a normative sample. By T2, boys approached the normative sample expectations, but far more girls still exceeded the clinical cutoff. At T1, however, girls were more compliant than boys. Unexpectedly, no differences were found on the preschool behavior questionnaire completed by the teachers. Raw scores on the CBCL did not reveal significant differences between boys and girls.

When examining parenting behavior, not many gender differences were observed, though those that did appear followed an interesting pattern. At T1, the mothers of boys showed more coercive behavior, which is related to their sons' appearing more noncompliant. The mothers of girls gave more commands that the child could comply with, and, accordingly, the girls looked more compliant in that situation. At T2, the mothers of the boys gave more positive attention to their sons following compliance.

Parenting attitudes were also examined. Vignettes of misbehaviors that could be interpreted as intentional, unintentional, or ambiguous were read to mothers. They were asked how intentional they would view the given action if their child were to act out this behavior. Mothers of girls rated misbehavior as more intentional. Mothers were also asked how they would punish their child for this misbehavior. Mothers of girls were more punitive, and this attitude was stable from T1 to T2.

The investigators examined four predictors for behavior problems—two measures from infancy and two from the preschool T1 period—that predicted externalizing and conduct problems at T1. In infancy, the investigators looked at attachment security (a dichotomous secure/insecure classification) and maternal negative affect (depressive symptoms). In preschool, a dichotomous classification of attachment and another measure of maternal negative affect were also used. Attachment security was chosen as a predictor since it develops in the first year of life, and, if proven to be a potent risk factor in the development of conduct problems, will point to potential areas of intervention. Maternal negative affect was chosen since it is highly correlated with behavior problems, although the direction of the effects is not very clear and probably works both ways.

Overall, security in infancy and maternal negative affect in the preschool years were found to be significant predictors of externalizing problems. When the predictors for externalizing problems were analyzed separately by gender, it was found that infant attachment was not a strong predictor for boys but was for girls. For the boys, the stronger predictor was maternal negative affect 1 year before T1.

In the prediction of conduct problems, there are two main contributors for boys at the preschool time period: Security and maternal negative affect in preschool. Neither of these, however, was significant for the girls.

Summary. This research concludes that the children of adolescent mothers are at risk for developing externalizing behavior problems in the preschool years. However, they are not at risk for developing internalizing problems at this age.

The severity of the behavior problems is indicated, since 20 percent of this sample received at least one diagnosis of a disruptive behavior disorder at 5 1/2 years. The bottom age for the diagnostic psychiatric interview is age 6, so this represents a group that is at risk at a very early age. In addition, the CBCL is normed for children ages 4–11, and even though the sample was clustered at the very young end, twice as many children as expected were at risk.

In terms of predicting externalizing behavior problems, for girls, infant attachment served primarily as the best measure or predictor of development of later behavior problems. For boys, preschool measures of maternal negative affect and preschool attachment were the best predictors.

In terms of risk and protective factors, by maternal report, the girls in the study exhibited more externalizing problems than boys. This makes the girls in this sample appear more at risk when compared to the general population, where girls have fewer behavior problems compared to boys. At absolute levels, gender was not an issue since raw scores revealed essentially no difference between boys and girls. But when both teacher reports and observations were used, boys were found to have more behavior problems than girls. Perhaps girls really do not exhibit more problem behaviors; rather, the mothers may be more critical of their daughters and therefore may report problem behaviors that are not substantiated by observation or teacher report. This may be related to how girls and boys, and, in particular, children of adolescent mothers, are socialized. This difference is not unique to this study. But, when information gained from external informants (such as teachers) or from behavior among peers is examined, the behavior of boys appears more deviant than that of girls.

Finally, this study suggests that adolescent mothers may provide unique, negative influences on the development of behavior problems. Further research should investigate the relationship between conduct problems in girls and intergenerational cycles of adolescent childbearing. Another study found that girls who have conduct problems and/or who are withdrawn are at risk not only for early childbearing but also for poor parenting, which feeds into the cycle of poor development for their children.

Reaction

Dr. Wasserman complimented the research for its inclusion of multiple domains that contributed to child outcome in terms of demographics, mothers' personality features, and social support. Each of these domains also contained multiple measures, another strength of the work. Furthermore, the various measures make use of multiple formats such as questionnaire data and observational data. However, difficulties also arise from having so many measures and domains. A tremendous amount of information is collected, but the data must be reduced to create information that is usable and precise.

Dr. Wasserman was particularly interested in the role of grandmother support. Various studies have found that adolescent mothers living in their own mothers' homes are not necessarily better off in terms of parenting, and their children are not better off in terms of outcome, than those who are living with a partner. Fathers do play a role in child development, and the fields of developmental psychology and maternal and child health must move to a more complete awareness of the whole social ecology of the child and the family.

Dr. Wasserman stated that the study shows some predictive ability for behavior problems, but it is less than was hoped. The research also reveals that single measures of either the child or the environment are rarely predictive of outcome. Broader, more reliable constructs rather than single measures must be investigated, since single, distal events rarely have long-term consequences. The flexibility of systems probably decreases over time, so that the number of "bad turns" or "wrong turns" taken in life becomes cumulative, and it becomes difficult to make a positive, healthy, effective choice. As insult is accumulated, it becomes very difficult to move families and children from one point of view to another.

This suggests the great need for early intervention. Unfortunately, because we can't identify with scientific certainty which infants are going to be in trouble in the first grade, intervention efforts may be redundant. Money may be spent on children who really did not need help in the first place.

Dr. Wasserman also noted that it is risky to compare outcomes from one study to group norms. Few instruments assess child behavior problems over time well; Achenbach's Child Behavior Checklist is one of these. On the other hand, normative information from the CBCL is not always accessible—good information is needed on who constitutes the norm groups. In order to make comparisons, it is important to know the degree to which a sample of children corresponds to the group on which the instrument was normed. Alternatively, within-group comparisons can be performed.

It is also important to note that the diagnostic tools available do not work very well at early ages. There is absolutely no good way to get a psychiatric diagnosis in a standardized format for a child under the age of six—probably not even for a child under the age of eight. And, furthermore, there is very little adequate normative data on the prevalence of child psychiatric disorders.

A clearer understanding is needed concerning which children have a behavioral disorder at age 2, 3, or 4. How can we measure that? Are these the same children who have speech and language disorders? Why is a child referred for services at age 2 or 3? Such information is not readily available.

This work highlights the need to control for or examine the effects of maternal risk factors in understanding the process involved in development of childhood behavior problems. The role of other life circumstances is also powerful. Family structure, father support, and ethnicity, for example, have major effects on the development of childhood behavior problems. So, for the adolescent mother, the risk factor involves not only the pregnancy but also the connections among the various circumstances of her life.

The data from Dr. Spieker's study also serve to illustrate the findings that these types of studies can reveal. For example, the study concluded from the data that girls in the sample perhaps did not exhibit more problem behaviors but that mothers were more critical of their daughters and therefore reported problem behaviors not substantiated either by observation or teacher report. This conclusion was a result of the multiple measures approach taken in the study. Without these multiple measures, this difference in maternal and external reports could not have been known.

Dr. Wasserman suggested that the study observation that mothers reported more behavior problems with their daughters may be related to the value that mothers and fathers place upon sons. Current divorce literature indicates that fathers are less likely to leave a son than a daughter. So, perhaps having a son may help keep the father present for a longer period of time. And having the father present to provide social support (in any form) lessens the mother's irritability and decreases her reporting of child behavior problems. This again suggests that one of the ways to strengthen the family is to ensure that emotional support is provided by a partner for the young woman—a suggestion worthy of further investigation.

Question-and-Answer Session

The moderator asked Dr. Spieker if she had investigated whether there was a difference in the reasons why the adolescent mothers lived (or did not live) at home, and, if so, whether that was as much of a factor as the presence of the grandmother in how their children turn out. Dr. Spieker responded that the study did examine that factor and found that living arrangements vary systematically by demographics, race, age, and parity. However, the investigators controlled for these factors in the analyses.

A participant asked whether there was any kind of measure of the attachment of the adolescents to their own mothers. Dr. Spieker responded that a postdoctoral student did some work on this topic, studying grandmothers who were involved in child care, but the results are still pending.

Asked why the investigators did not seem to see any internalizing problems, Dr. Spieker responded that this finding could have been more a result of the types of measures used rather than

the absence of internalizing problems. She explained that each child will be examined for internalizing problems through a psychiatric interview at the end of third grade (in the school-age followup phase).

In conclusion, Dr. Spieker was asked about the practical consequences of the research findings. She responded that the research shows that some children who are on the “early starter” pathway to developing behavior problems may be identified early, and these children need intervention services as early as possible. The family system in which the child is being reared also needs attention. For example, if an adolescent is living at home with her mother, then the quality of the relationship with her mother needs to be addressed. If this relationship is poor, Dr. Spieker’s research suggests that simply moving the adolescent mother out of the home does not help, because both living arrangements and quality of grandmother support are relative to the quality of the relationship. On the other hand, if the adolescent moves out of her mother’s home and is involved with a partner, then intervention that helps her develop social skills to have enduring and positive partnerships may be more important.

Publication

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