II. HUMAN DEVELOPMENT: INTERSECTIONS WITH PSYCHOANALYTIC PERSPECTIVES

PSYCHOANALYTIC RESEARCH USING LONGITUDINAL STUDIES: AN INQUIRY ON THE DEVELOPMENTAL IMPACT OF EARLY MATERNAL PROJECTIONS

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A growing demand for empirical studies that help clarify and validate psychoanalytic theories and concepts has been addressed by many authors in recent years (Emde and Fonagy 1997; Wallerstein and Fonagy 1999; Fonagy 2000; Westen 1998; Galatzer-Levy and Hauser 1997). Psychoanalysis is often accused of being far better at generating theories than at testing them. As a result, the field has not been able to produce generally accepted scientific proofs of its theoretical claims and progress as much as other areas of psychology and medicine (Kandell 1998, 1999).

Psychoanalytic theories in general and object relations theory in particular maintain that relationships, beginning with the mother-infant dyad, are primary and that intrapsychic, interpersonal, and group experiences lay the foundation for the development of individual identity. Object relations theory argues that the infant can relate to others at a very early age and that relationships with others are therefore primary. Introjection, identification, projection, and projective identification are some of the psychodynamic processes involved in the creation and shaping of the internal world.

It is well known that infants are born with a limited capacity for autoregulation and rely on the primary caregiver to return them to homeostasis when emotionally overwhelmed by positive or negative affective states. These interpersonal regulatory processes have been
described by authors from different schools, all of whom note that the mother’s capacity for dealing with the infant’s emotional demands depends on her ability to correctly interpret the infant’s cues and needs (Bion 1959; Stern 1985; Tronick and Gianino 1989; Fonagy et al. 1995). As I argue below, these processes are very likely to be compromised if the mother misinterprets the infant’s cues. While much has been written about the clinical aspects of projection and projective identification and about the regulatory mechanisms taking place in the early mother-baby relationship, little empirical research has addressed the complex dynamic mechanisms involved in the failure of these early regulatory processes.

I propose that the operationalization of early maternal projections of negative attributions can be helpful in understanding the particular dynamic interchanges that take place early in life and begin to shape the child’s internal world. These mechanisms, I suggest, are probably linked with the failure of such factors in the early mother-baby relationship as adequate levels of maternal sensitivity and containment, a failure that will impair development of the child’s mentalizing capacities. I hypothesize that this failure will be manifest across multiple domains and in various phases of the child’s development.

Aims

The main objectives of this research are threefold: (1) to address a psychoanalytic view of early emotional development, emotional containment, and maternal projection, testing hypotheses on the developmental impact of these processes; (2) to explore the sources of data suitable for testing such hypotheses; (3) to evaluate the advantages and disadvantages of using secondary analysis of existing longitudinal data sets in conducting research on child development from a psychoanalytic perspective. To the best of my knowledge, no previous studies have used secondary analyses of large longitudinal data sets for the specific purpose of testing psychoanalytic hypotheses.

Method

Longitudinal studies are essential in exploring the developmental sequences that place children at risk, in identifying possible protective factors, and in generating high-quality evidence about health and well-being (Farrington 1991; Rutter 1994). Longitudinal studies, using time-ordered waves of data collection, document sequences of events
occurring in the lives of individuals or families, thereby identifying continuities and changes in behavior across life phases (Farrington 1991). These studies, which use multimethod designs, are among the most sophisticated and robust research techniques available for the study of human development (McCall and Appelbaum 1991). Psychoanalytic developmental theories assume that risk factors for adverse outcomes likely have cumulative and enduring effects on children’s health and development. However, because protective factors can interact with these risk factors to foster the development of resilience, not all “high-risk” children will develop problems in childhood or later life. Data obtained from longitudinal studies allow the modeling of complex interactive pathways between early factors and later outcomes, providing important information on the continuity of developmental processes.

Secondary analysis of existing longitudinal data sets provides a cost-effective way of testing hypotheses (McCall and Appelbaum 1991). In the U.S. and Britain, a network of data archives is readily accessed, greatly facilitating secondary analysis research. The large size of the samples available allows the use of statistical techniques that are required in analyzing observational (nonexperimental) data; the longitudinal approach provides an additional vantage point from which to probe questions of causality.

In this study, maternal projection was operationalized using an item from the Parenting Stress Index (Abidin 1983) that appears to index the projection and attribution of a malignant intentionality to the baby: “my baby does things that bother me just to be mean.” Additionally, the items “my child rarely does things for me that make me feel good,” “most times I feel that my child does not like me and does not want to be close to me,” and “when I do things for my child I get the feeling that my efforts are not appreciated very much”—all from the Parenting Stress Index version used in the Yale Infant and Children Follow-up Project, (ICFP)—were also selected, as they appeared to convey a similar projective pattern. A face-validity test considered whether a group of independent raters would interpret these items as indexing the same projective pattern identified by us.

Additionally, a comprehensive data analytic strategy was followed in conducting secondary data analysis of the NICHD Study of Early Child Care, not only to examine the correlates of maternal projection but also to estimate the developmental impact of early maternal projection on later outcomes. Finally, data from a longitudinal study from the
Yale Child Study Center were used in an attempt to replicate the results of the NICHD secondary analyses.

**Results**

Table 1 presents a summary of the main findings of this research.

The first group of results are related to the face-validity test conducted to ensure a correct operationalization of the concept of maternal projection.

Section II presents the results of the analyses performed to determine if maternal projection of a negative intentionality to the baby is associated with other maladjusted factors. It was hypothesized that the projection of a negative intentionality to the baby, at an age at which no evidence supports the existence of such intentional behavior, is associated with maternal characteristics such as high levels of maternal depression, insensitivity, and other disrupted features.

Section III shows the developmental impact of early maternal projections. It was hypothesized that maternal projections of a negative intentionality to the baby, measured at six months of age, will significantly predict the variance of developmental outcomes including attachment security, behavioral problems, and effortful control.

Finally, Section IV shows replication of the results obtained in the NICHD Study of Early Child Care regarding the main effect of maternal projection on developmental outcomes, using the sample of the Yale ICFP. It also presents further analyses of these data, including an examination of the longitudinal trajectory of maternal projection and an assessment of maternal reflective function.

**Discussion**

Section I describes the operationalization of maternal projection using the Parenting Stress Index item “*my baby does things that bother me just to be mean.*” A face-validity test showed that the item was reliably rated as addressing a psychoanalytic concept by a group of independent raters. Moreover, the qualitative interpretation of the item by the same raters showed that the item is associated with projection and projective identification.

The results presented in Section II confirm the general hypothesis that the projection of a negative intentionality to the baby at one month and at six months is associated with an overall failure of the mother’s ability to contain and regulate either the child’s emotions or her own.
74 questionnaires sent, 22 returned, 14 valid. Interrater reliability for the 14 raters across the 8 items acceptable ($k = .67; z = 14.11; p < .001$). Percentage of agreement = 91.70%.

Significant positive linear correlation of maternal projection with maternal depression and child temperament at both 1 and 6 months. Significant negative correlation of maternal projection and maternal sensitivity at 6 months.

At 1 and 6 months projective mothers are less likely to be married (59% vs. 78%). Projective mothers are more likely to be younger and to belong to families with lower income-to-needs ratio. Projective mothers report significantly higher rates of depression ($t [1 \text{ month}] = 4.99; p < .001$; $t [6 \text{ months}] = 3.63; p < .001$). At 6 months projective mothers also report significantly higher levels of neuroticism and lower levels of agreeableness and extraversion.

At 6 months projective mothers are significantly less sensitive, more detached, more intrusive, and less stimulant of cognitive development, and show more negative regard for child (all differences, $p < .001$).

At 1 and 6 months there were no significant differences between children of projective mothers and children of nonprojective mothers in terms of gender, gestational age, health problems, and birth order. There were significant differences for temperament when this was reported by mothers, but not when it was reported by the caregiver (at caregiving setting).

Table 1. Summary of Findings

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<td>Correlates of Maternal Projection at 1 and 6 months of the child’s age</td>
<td>Pearson correlation of maternal projection with hypothesized correlates</td>
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<td>Characteristics of projective mothers at 1 and 6 months of the child’s age</td>
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(continued)
Maternal projection is predicted by a combination of maternal age and maternal depression. In a model with an overall classification success rate of 88% (Log Likelihood = −186.90; \( \chi^2(11) = 35.47; p < .001 \)) it was shown that younger mothers with higher levels of depression were more likely to be projective. This probability was also increased if the mother was divorced or separated.

The results also suggest a strong interaction between age and depression. The effect of depression on the probability to project is moderated by age, that is, and younger mothers are at higher risk to be projective irrespective of their depression score. The results also suggest that the effect of maternal depression on the probability to project is better explained when controlling for the quadratic effect of depression on projection, suggesting that there is a nonlinear effect of depression on projection.

In a model with an overall classification success rate of 92%, children of projective mothers were predicted to be 81.3% more likely to score above the clinical cutoff point for externalizing behavior when holding all other variables constant (Log Likelihood = −156.488; \( \chi^2(13) = 23.41; p < .001 \)).

Children of projective mothers were predicted to have lower attention focusing scores (\( \beta = −.13; t = 2.84; p < .001 \)) and lower inhibitory control scores (\( \beta = −.11; t = 2.66; p < .001 \)). No significant effect was found for the CPT or for the Stroop Task.

Maternal projection significantly predicts disorganized attachment at 36 months (\( \beta \) [D vs. B] = .25; \( z = 1.86; p < .001 \)). All other variables held constant, children of projective mothers were predicted to be 80.5% more likely to have a disorganized attachment rather than a secure attachment.
On average, mothers in the Yale sample are younger and their babies have lower gestational age than those in the NICHD SECC sample. The Yale sample presents a significantly higher rate of maternal projection ($t = 17.49; p < .001$), as expected. In order to allow a confirmation of the results regarding the effect of maternal projection on later developmental problems, these differences have to be taken into account.

A fully interactive model was run on the pooled Yale and NICHD samples, controlling for sample belonging and for the interaction of the predictors with sample belonging. The results showed that the residual variances for the separate samples are not significantly different, allowing a reliable comparison of the coefficients obtained for the main effect of maternal projection on externalizing problems, hence confirming a replication of the results.

(1) Results from a GCM model using maximum-likelihood (in which model parameters are estimated according to the maximum likelihood of observing the data actually observed) showed that the developmental trajectory that underlies the 4 repeated measures of maternal projection are characterized by significant random and fixed effects. The results also show a highly negative correlation between the intercept and slope terms ($\alpha \beta = -0.67$), indicating that mothers who reported higher levels of maternal projection at 12 months tended to present steeper decreases in projection over time.

(2) A similar model but in which the baseline values and the variance over time of externalizing behaviors were modeled as a function of the variance and baseline values of maternal projection showed that the baseline value of projection at 12 months significantly predicts the baseline value of a child externalizing problems at 54 months but not its variance over time.

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<td>The results showed that projective mothers report lower levels of RF ($t = .90; p &lt; .05$).</td>
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The hypothesis that maternal projection would be better predicted by characteristics of the mother than by characteristics of the baby was also confirmed. The results show that the risk for maternal projections at six months is predicted by a combination of maternal age and depression.

The results presented in Section III show an enduring and pervasive effect of maternal projection at six months on several developmental outcomes. Compared to children of nonprojective mothers, children of projective mothers were 81.3% more likely to score above the clinical cutoff point for externalizing behaviors at 54 months. Children of projective mothers were also expected to develop lower levels of self-regulatory capacities at 54 months. Further, maternal projection was correlated with disorganized attachment at 36 months, even after taking into account the effect of the other covariates and controls: children of projective mothers were 80.5% more likely to have a disorganized attachment status at 36 months than were children of the average nonprojective mother.

The results show that maternal projection at six months predicted lower levels of attention focusing and inhibitory control, and that this effect was independent both of the effect of maternal depression on those outcomes and the effect of maternal sensitivity on attention focusing. The results obtained from the models tested show the direct effects of maternal depression and projection on externalizing behavioral problems and an effect of maternal depression and projection on externalizing behavior mediated by effortful control, suggesting that these two factors affect child behavior at 54 months through at least two different paths. These results collectively support the idea that effortful control acts as mediator for a pathway from the early mother-child relationship to later adaptive outcomes. The results also sustain the point that early maternal projection is associated with failures along several important dimensions of the child’s development, especially the development of self-regulatory capacities dependent on appropriate levels of early emotional interaction and containment.

The finding that the longitudinal impact of maternal projection on various developmental outcomes was independent of maternal depression, maternal sensitivity, and many other confounders suggests that the tendency to attribute malignant intentionality to the baby at such a young age may be a clinical state in its own right, with serious implications for long-term child development.
The results also show that maternal projection independently predicted child behavioral problems at 54 months, even when taking into account the effect of sensitivity and the continuity of correlated suboptimal caregiving factors, namely, maternal depression and maternal sensitivity over the first three years of the child’s life.

These findings suggest that when looking at the factors predicting the child’s emotional and behavioral development, one should pay closer attention to more subtle and dynamic aspects directly related to maternal strategies to effectively reflect and contain the child’s emotions. Maternal projection (more specifically, the projection of a malignant intentionality) to the infant at an early age seems to be a good indicator, if not an ideal one, of these dynamic processes.

Maternal misinterpretation of the child’s needs, along with the projection of a persecutory intentionality that is associated with an overall failure of maternal sensitivity, may compromise the processes of internalization and emotional maturation. What the child internalizes is an image of him- or herself as mean, hostile, and malignant. The child may not only internalize this representation, but may also become strongly identified with it, eventually behaving in ways that confirm the mother’s initial projection.

The results of analyses of the Yale ICFP data reveal no differences between the two samples regarding the effect of maternal projection in externalizing problems. Hence, replication of the results is confirmed.

Additional analyses done with the repeated measures of maternal projection reveal a pattern of systematic change and individual variability in the reports of maternal projection over the child’s first six years. Moreover, the baseline value for maternal projection at 12 months significantly predicts the baseline values of a child’s externalizing problems at 54 months.

Finally, Parental Developmental Interviews administered when a mother’s child was on average six years old were used to explore possible differences in the reflective functioning of projective and non-projective mothers. The results show that maternal projection is significantly associated with limitations in the mother’s reflective function.

**Strengths and Limitations of the Study**

The methodology employed in this research is innovative in the specific field of hypothesis testing involving psychoanalytic concepts and constructs. The results together show the pertinence and robustness of the
method for a systematic inquiry into psychoanalytic ideas that complies with the scientific standards generally demanded in academic research.

This study focused on projection, a concept central to psychoanalytic theory. This complex mechanism was investigated from a rather narrow empirical perspective. The selection of a single item because it could be operationalized, of course, suggests many limitations to the generalizability of the study’s findings. There is a need, too, for more reliable and valid measures of this undeniably important mechanism.

Another limitation is that the NICHD and Yale ICFP data are not representative in the statistical sense, and that comparisons with other data sets, national or otherwise, should therefore be made with extreme caution.

REFERENCES


