To estimate the influence of maternal stress, marital conflict, and psychosocial risk on the interaction between mothers and their children, this study observed 97 mother-child pairs in a laboratory setting in the presence of another unfamiliar mother-child pair. All families were francophone families from the Montreal, Canada, region; children were between 31 and 70 months old. The quality of the mother's and child's observed interactions and sociability was coded, and mothers completed questionnaires assessing parental stress, quality of marital relationship, availability of social support, and family socioeconomic status. Analysis suggested that economic, marital, and parental stress accounted for up to eight times more variance in mother-son interaction than in mother-daughter interaction. Mothers who reported more social isolation, a more coercive marital relationship, and greater stress in the parental role were more distant, colder, and less attentive in their interaction with their preschool sons than other mothers. (MM)
Parental, marital and socioeconomical stress as predictors of the quality of mother-son and mother-daughter interaction.

Marc Bigras
University of Sherbrooke

Peter J. LaFreniere
University of Montréal

For comments please write to:
Marc Bigras
Université de Sherbrooke
Département d'éducation spécialisée
Sherbrooke, Québec
J1K 2R1


Paper presented at SRCD (1993) New Orleans, USA
Abstract

Biological and social learning theories suggest that young boys will be more reactive to familial and extrafamilial stressors. Therefore, it was hypothesized that these adverse conditions would have a greater impact on mother-son interactions as compared to mother-daughter interactions. Ninety-seven mother-child pairs were observed in a laboratory setting in the presence of another unfamiliar mother-child pair. Mothers also completed questionnaires assessing parental stress, quality of marital relationship, availability of social support, and family socioeconomical status. Results indicated that economic, marital, and parental stress accounted for up to eight times more variance in mother-son interaction as compared to mother-daughter. Mothers who reported more social isolation, a more coercive marital relationship, and greater stress in the parental role, were more distant, colder, and less attentive in their interactions with their preschool sons (for results see tables).

Results suggested that stress related to marital conflict, lack of social and material support could affect maternal perception, emotional availability and coherent parenting. As well, children might be affected by external stressors. Young boys confronted with adverse conditions, such as marital conflict, might be socially encouraged and/or biologically predisposed to "react" in a way that might be more difficult for parents to manage. A reactive child may be difficult for the mother, therefore, external stress would become an internal stress in regards to the mother-child relationship. However, the statistical interaction between the mother's report of stress and the sex of her child support a bidirectional model; the mother-child relationship could be better understood when mutual influences of family ecology, children and parents are considered.
Introduction

As early as preschool age, we can identify socio-affective problems in children, especially in boys who seem to be more vulnerable during this developmental period. Even though affective disorders seem to occur as frequently in girls as in boys at this age, findings tend to suggest that boys experience up to four times more conduct disorders (Achenbach & Edelbrock 1981; LaFrenière, Dumas, Capuano & Dubeau, 1992). Often, boys' socio-affective problems are explained as the result of a combination of dispositional and environmental factors.

The greater reactivity of boys to various types of stress raises the question of how parents may be affected by these aggressive or antisocial behaviours found more often in boys. Since the development of parent-child relationship does not simply depend on the individual characteristics of parents and children, we chosen to investigate the quality of parent-child interactions under external stressors such as marital conflict, social isolation or other risk factors. For example, single-parent or isolated mothers experience more parental stress when they have aggressive or ill-tempered children (Crokenberg, 1981; Ethier & LaFrenière, 1991). Thus, we hypothesize that external stressors, such as marital and socioeconomic factors, might exacerbate a more vulnerable family subsystem; that is, the relationship between the mother and the son.

The goal of the present study is to estimate the influence of maternal stress, marital conflict and psychosocial risk on the interaction between mothers and their children. We have put forth the general hypothesis that unfavourable familial and extrafamilial conditions will be more highly associated with difficult mother-son interactions than with mother-daughter interactions.
Method

Subjects
The study uses a sample of 97 mothers and their children, drawn from an original sample of 262 francophone families from the Montreal region. This sub-sample is composed solely of two-parent families (a spouse has been present for at least one year) with the children attending preschool at least three days a week. These children, 54 girls and 45 boys, are aged between 31 to 70 months.

Approximately one third of the families have a modest family income. Another third of the families represents the middle class. The final third is composed of families with elevated education and income.

Measures

Quality of the interaction and the sociability of the mother and the child (measure liberally adapted from Matas, Arend & Sroufe, 1978): Four observers evaluate the behaviours and attitudes of the mother with respect to her child, and with respect to the unfamiliar mother and her child. At every three minute interval, the observers make an evaluation on 12 dimensions that are grouped into 4 scales. Interrater reliability on scales 1 through 4 was .78 .72 .72 .90 for the mother and .70 for the sociability of the child, using the Spearman-Brown formula.

1-maternal contact, three dimensions of the quality of the interaction are evaluated: the frequency, warmth and the flexibility of the behaviours and attitudes of the mother as pertaining to the child.
2-maternal attentiveness, the observers judge the dimensions of orientation, restriction and supervision of the child.
3-maternal presence, measures the way in which the mother responds to the child's needs. The mother who is calm, who is present when the child demonstrates a need, or who anticipates the child's needs, obtains a higher score on this scale.
4-sociability of the mother and the child with respect to the strangers. The frequency, warmth and flexibility on dimensions of contact with the strangers apply to the mother and the child.

Parental stress: The level of parental stress perceived by the mother is evaluated by the P.S.I. questionnaire (Parental Stress Index)
Marital relationship:

1- Dyadic Adjustment Scale (D.A.S.). This questionnaire of 32 phrases encompasses a complete scale of dyadic adjustment and four sub-scales (Spanier, 1976).

2- Marital Conflict Index (M.C.I.). This Likert-type questionnaire is composed of 19 phrases distributed on 2 scales either 1- negative reciprocity or 2- conflict avoidance. The complete scales of the two instruments have a correlation of -0.49.

Social isolation: The variable used to evaluate the mother's social contact is the averaging of contacts, from regular to never (4 point scale), of the mother with her parents, friends, colleagues from work and contact with health professionals (Walther, 1980).

Psychosocial risk: A composite of 5 variables is required, including 1 - the family income, 2 - the mother's education, 3 - family size, 4 - the size of the home and 5 - ownership regarding the home. Each of these variables is coded under three levels of risk for the family.

Discussion

The results support the hypothesis that psychosocial risk, marital conflict, and parental stress are associated with maternal behaviours. This association is particularly evident within mother-son interactions: the various sources of stress of this study account for up to eight times more variance of maternal behaviours in their interactions with their sons as compared to their daughters of preschool age. Mothers seem colder, more distant, less available and less considerate with their sons when they are experiencing parental stress, social isolation or marital conflict.

At first glance, the overall results of this study may be explained by referring to the antisocial characteristics of some mothers. An isolated mother, who maintains aversive contact with her spouse, might be hostile or avoidant towards her child. But, if the observed differences between mother-daughter and mother-son interactions are to
be fully explained, then the unique context of the mother-son relationship must be brought into play. We suggest that boys, who manifest more antisocial behaviours than girls in response to stress—like marital conflict or aversive mothers—, would elicit strong, negative parental behaviours. As result of external stressors then, internal stressors would develop within the mother-son relationship, and would be evidenced by negative maternal behaviour such as described herein.

A bidirectional model is better at integrating the results of the present study. It is, according to all the evidence, the combination of the characteristics of the mother, the child, and the family environment that best explain the maternal behaviours observed in this study. On one hand, stressed mothers can be more vulnerable to disruptive behaviours, like aggression, rebellion against authority figures, etc., that are more often found in boys. On the other hand, the tendency of boys to express anxiety through antisocial behaviours can be exacerbated in a stressful environment with an aversive mother, marital conflict, the presence of an antisocial model, etc.. Perhaps, these conditions of mother/aversive-son/reactive reunions can generate a cycle of reciprocal negative exchanges whereby the participants can find difficult to escape.

references
### Table 1
Partial correlations\(^a\) between direct (laboratory) and indirect (questionnaires) measures for daughters (n=49) and sons (n=42).

<table>
<thead>
<tr>
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\(a\) controlling for child's age

\(<.05\) (onetail) transformation \(Z\)

\( ^* \) \( p < .05 \)

\( ^{**} \) \( p < .01 \)

\( ^{***} \) \( p < .001 \)
Table 2

Hierarchical multiple regression of maternal stress, marital conflict, social isolation and psychosocial risk on the quality of maternal behaviors and child's sociability

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<th>social isolation</th>
<th>psychosocial risk</th>
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<td>.04</td>
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Total R²

mother-son (N=43)

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<tr>
<th>step</th>
<th>son's age</th>
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Total R²

*p < .05  ** P < .01  *** p < .001
daughters (N=48)

- Social isolation → Marital conflict
  - 0.15 (0.22)
- Marital conflict → Psychosocial risk
  - 0.32* (0.29)
- Psychosocial risk → Maternal behavior
  - -0.09 (0.07)

- Social isolation → Parental stress
  - 0.25 (0.08)
- Parental stress → Marital conflict
  - -0.12 (-0.02)
- Marital conflict → Psychosocial risk
  - 0.24 (0.27)
- Psychosocial risk → Maternal behavior
  - -0.26 (-0.32)
- Parental stress → Maternal behavior
  - 0.13 (0.03)

sons (N=48)

- Social isolation → Marital conflict
  - 0.50*** (0.55)
- Marital conflict → Psychosocial risk
  - 0.30* (0.38)
- Psychosocial risk → Maternal behavior
  - -0.22 (-0.38)
- Social isolation → Parental stress
  - 0.10 (0.24)
- Parental stress → Marital conflict
  - -0.40** (-0.56)
- Marital conflict → Psychosocial risk
  - 0.07 (0.28)
- Psychosocial risk → Maternal behavior
  - -0.18 (-0.54)
- Parental stress → Maternal behavior
  - -0.09 (-0.35)