

Ecosystem Adversity as Setting Factors in Mothers' Judgment of Child Behavior and Indiscriminate Mothering

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Several studies have shown that troubled mothers are not accurate observers of their children's behavior. These mothers have a global and usually blame-oriented reporting style coloured by dysphoric views of social isolation, social coercion and socioeconomic disadvantage. The dysphoric view describes a number of contextual or setting factors that seem to influence a mother's observational reports about her child more than the child's actual behavior does. Of course, when this observational bias exists, the mother's parenting performance is bound to be comprised.

According to the considerations above, this study was designed with a group of 21 mother-child dyads characterized by their coercive interactions and child abuse (physical and emotional). The children were school-aged children ranging from 4 to 14 years of age and all mother-child dyads were observed at home. Two sets of analyses were conducted, one related to the maternal perception and one related to maternal behavior. The maternal judgment of the child's externalizing behavior problems throughout the CBCL/E and of the child's deviant behavior through the dayly scale rating constituted the criterion variables for the maternal perception analyses. The indiscriminate maternal reaction to child prosocial behavior was the criterion for the second set of analyses. Ecosystem variables and observational measures were taken as the predictors.

The findings suggest that the role played by the child's deviant behavior as predictor is very important in the mother's specific report, the mother's rating of her child's behavior during the previous hour. However, the best predictors of the mother's global judgment were both her actual aversive behavior and the setting factor as well as the perceived quality of social contacts. Likewise, with regard to the maternal behavior predictions, the results indicate that ecosystem factors and maternal judgment predicted the mother's indiscriminate behavior following her child's prosocial behavior. Implications of these findings are discussed.

Keywords: Child physical abuse, indiscriminate mothering, maternal perception

Several empirical studies suggest that the coercive behavior of deviant children is related to their mothers' indiscriminate behavior toward them (Dumas, 1984; Dumas & Wahler, 1985). These researchers proposed that some mothers may provide their children with an unpredictable interactional context which serves an aversive function. In such a context, any child's response that makes maternal attention more predictable will be negatively reinforced by temporary escape from unpredictability, regardless of the valence of the obtained maternal attention. The predictability hypothesis may account for the "escalation phenomenon" This phenomenon, first reported by Patterson (1976) and later by others researchers (Snyder, 1977; Reid, Taplin & Lorber, 1981) reflects the fact that in clinical dyads a mother's use of aversive consequences often leads to the

child's escalating aggression and generates long coercive interchanges (Patterson, 1982). The longer the aversive exchange lasts, the more predictable it becomes. According to the predictability hypothesis, aversive maternal attention functions as a positive reinforcer in these prolonged mother-child matched exchanges.

Wahler and Dumas (1986) reported correlational support for the predictability hypothesis in dyads with a history of severe interactional problems and child abuse. Mothers became far more discriminating in their social attention when their children engaged in long chains of aversive actions. In addition, deviant child behavior was more likely to occur on days when mothers were more indiscriminate toward their children. However, this study could not answer the question about the directionality of the

process, that is the temporal relationship between maternal attention and child coercion. Further research on a molecular level was aimed at examining the directional prediction that maternal indiscriminate attention would decrease after the child's coercive behavior. Wahler, Williams and Cerezo (1990), using sequential analysis strategies outlined by Bakeman and Gottman (1986), found the expected sequential dependencies. The indiscriminate behavior of mothers encouraged their children's coercion and became more predictable when the children behave in aversive ways. These findings have been replicated with Spanish dyads marked by highly coercive interchanges (Cerezo & D'Ocon, 1995a).

Recently Cerezo, Wahler and Skinner (1993) reported that clinical mothers were significantly more indiscriminate than their non-clinical counterparts in response to their children's prosocial (i.e., positive or neutral) behavior. However both groups showed a similar reaction to deviant child behavior. This pattern between clinical and non-clinical dyads was found in two cultural contexts: the USA and Spain. Likewise, Cerezo and D'Ocon (1995b) reported similar findings with a group of Spanish families with highly coercive interactions resulting in child abuse. These authors reported findings that seemed to suggest that this process of indiscriminate mothering may be operating even when the child displays covert conduct disorder (truancy, stealing, firesetting...) with a low rate of child aversive behavior at home. In these dyads, when school or social agencies report the child's deviant behavior away from home to the parents, parents and children often engage in very coercive interchanges.

Setting Events and Maternal Judgment of Child's Behavior

Why do some mothers present this maladaptive parenting process? Why do some mothers react with indiscriminate social attention to their children's neutral or positive behavior? Since the early 80's some empirical efforts have been dedicated to examining the role played by adverse setting factors in relation to maternal care behavior.

An important factor has been "insularity", which is defined as "a specific pattern of social contacts within the community that is characterized by a high level of negatively perceived coercive interchanges with relatives or helping agencies representatives

and by a low level of positively perceived supportive interchanges with friends" (Wahler & Dumas, 1984; p. 387). The main studies in this area have been conducted by Wahler and his colleagues (i.e., Wahler, Leske & Rogers, 1979; Wahler, 1980; Wahler & Afton, 1980; Wahler, Hughey & Gordon, 1981; Wahler & Graves, 1983; Wahler & Dumas, 1984; Dumas & Wahler, 1985). Insularity has been shown to affect maternal care behavior. On days in which insular mothers reported coercive community exchanges prior to a home observation they were significantly more aversive and indiscriminate with their children (Dumas & Wahler, 1985; Wahler, 1980; Wahler & Graves, 1983). The insular mothers were more likely to respond inconsistently to their children and the coercive episodes lasted much longer than in non-insular dyads (Wahler et al., 1981). Comparing insular with non-insular clinical dyads, Dumas and Wahler (1985) reported that insular mothers were more likely to respond aversively to any child behavior in terms of conditional probabilities. Of greater interest in this study was that the children responded with three times as much aversiveness to maternal aversive behavior as opposed to non-aversive maternal behavior; so the children did discriminate whereas their mothers did not.

Mothers who report aversive social contacts with adults also report other sources of aversive stimulation such as socioeconomic disadvantage and emotional distress. These multiply coerced mothers show attentional deficits when compared with middle income mothers whose coercion problem are restricted to exchanges with their children (Wahler & Afton, 1980).

All these findings suggest that multiply coerced mothers have a global and usually blame-oriented reporting style which is colored by dysphoric views of social isolation, social coercion and socioeconomic disadvantage. The dysphoric view describes a number of contextual or setting factors that seem to influence a mother's report about her child's behavior. If this is correct, the mother's observational bias prevents her from making consistent distinctions between the child's prosocial and deviant behaviors and from timing her responses to correspond to what the child does.

A further step in this line is represented by Sansbury and Wahler's (1990) study about the role of the mother's biased perception of her child on her maternal indiscriminate behavior. These authors proposed that the child's deviance in addition to the poor quality of the ecosystem influence the mother's indiscriminate behavior. But they also proposed that these influences are mediated through

the mother's perceptual bias. Two different kinds of mother's reports were used to measure her perceptual bias: summary (global) and monitoring (specific) reports. The findings showed that the inconsistency trap which is a maladaptive mothering process depended on the *global* maternal report of the child's behavior and the ecosystem influences. These findings suggest that the kind of report requested of the mother is an important factor in understanding which process is involved. Global reports are more susceptible to bias. In fact, there is some agreement about the troubled mothers' perceptual bias using global reports of their child's behavior, but some researchers using specific reports found a positive bias – overcoding (i.e., Lorber, Reid & Simard, 1979) while others found a negative bias – undercoding (Wahler & Sansbury, 1990). Another important factor has to do with the quality of child behavior involved in the report – deviant vs. prosocial. Given that indiscriminate maternal behavior is a response to child behavior, the quality of this antecedent (deviant or prosocial) appears to be an important criterion in distinguishing two types of indiscriminate maternal behavior: after child's prosocial behavior and after child's deviant behavior (Cerezo et al., 1993; Cerezo & D'Ocon, 1995 b).

In line with the above research and considerations two set of analyses were designed. The first one was aimed at examining the contribution of the adverse ecosystem and the child's deviance to *maternal perception of her child*. The purpose of the second set of analyses was to examine the contribution of the adverse ecosystem, the mother's perception, and the child's deviance to *indiscriminate maternal behavior* toward her child's prosocial behavior. Maternal perception was studied through a report based on her experience with the child, and through a rating of her child's behavior in a very specific time frame.

Four predictions guided our research: first, it was predicted that the child's deviant behavior would have a more important role in predicting a mother's specific report than global report. Second, it was expected that the setting factors, particularly the perceived quality of the mother's social contacts, would affect these multi-stressed mothers' judgment, with either the ratings or the reporting, about their children's behavior. Third, the mother's indiscriminate behavior towards her child's prosocial behavior would be predicted by the mother's judgment and the ecosystem factors. Finally, no correlation was expected between aversive maternal behavior and aversive child behavior.

Method

Subjects

The study was conducted with a group of 21 mother-child dyads. All of these dyads were referred for treatment by social agencies and schools because of the children's deviant behavior and the mothers' inability to cope with these problems. All the mothers used a very punitive form of discipline with their children. As a result of mother-child confrontations, child physical and emotional abuse was present in about 60% of cases. The children whose average age was 8.47 ($sd = 3.14$) ranged from 4 to 14 years old. Sixty-six per cent were boys and 33.3% were girls.

According to the mother's complaints, the children as a group displayed highly disturbing behavior: fighting, temper tantrums, truancy, stealing and oppositional behavior. The Child Behavior Checklist (CBC; Achenbach & Edelbrock, 1983) showed an externalizing average raw score of 36.2 ($sd = 16.4$) and a total score of 73.8 ($sd = 30.4$). Although Spanish standardized profile are not yet available, for purposes of research comparisons the T-score for externalizing problems for this group was 71.4 (98th percentile).

Following the Dumas and Wahler (1983) criteria, the group was considered as socioeconomically disadvantaged (SED) with an average of 3.5 markers out of 6. In fact, 57.14% (12) of the families had 4 or 5 markers and 23.8% (8) had 3 indicators. As a group, mothers tended to be poor, to have more than three children, to have limited education, and to live in a high crime area; all the cases were referrals.

In a baseline assessment conducted during a period of about three weeks prior to any intervention the mothers completed self-reports of depression through the Beck Depression Inventory (BDI; Beck, Ward, Mendelsohn, Mock & Erbaugh, 1961) and reports about their extrafamily contacts with adults during the prior 24-hour time period through the Community Interaction Checklist (CIC; Wahler, Leske & Rogers, 1979). The BDI and the CIC checklist were read aloud to the mother by the therapist during the interview. The CIC is an interview format that allows the mother to specify the quantity and the quality of her social contacts. On the BDI the mothers' average score was above the mild symptomatology cutoff score of 10 ($\bar{X} = 14.38$, $SD = 10.13$). Likewise the average of the extrafamily contacts reported by the mothers was three ($SD = 2.45$). 52.56% ($SD = 34.06\%$) of the social contacts were rated as neutral and 13.65% ($SD = 20.4\%$) as aversive. These mothers fit the criteria to be considered

as insular mothers (Dumas & Wahler, 1983; Wahler, 1980).

This sample was very similar to the samples of multi-stressed mothers studied by Wahler (1980), Wahler et al. (1990) and the last report of Wahler, Cartor, Fleichsman and Lambert (1993). Also, this sample is quite similar to the Spanish groups studied by Cerezo and D'Ocon, (1995b) and Cerezo et al. (1993). All these studies used the same instruments and observational procedures.

Procedure

Within three weeks of the mother's and child's first baseline assessment interview an observer visited the family's home twice a week. An average of 5 one-hour observational sessions were obtained per family. According to the rules listed by Reid (1978) during the sessions only family members were present and they were to stay within two rooms, phone calls were to be kept brief and no TV were turned on. The observation was part of the baseline assessment package aimed at making a diagnosis and at designing with the mother (and in some cases with the father) the strategies and the goals for the intervention. Along this assessment baseline period of three weeks between two and three interview sessions were scheduled to complete all the self-report and questionnaire information.

In this study, all subjects met the criterion to have been observed at home once within 72 hours of the interview where the CIC was completed by the mother. This session will be called *proximal session*.

Following each observational session, the observer obtained a mother's report by asking her to select on a 7-point scale the number that best summarized her child's behavior during the session. On this scale, the higher the number, the more poorly the child's behavior was rated. In this study, the rating is called the Mother's Observational Report (MOR) and is similar to the SCAL used in the Panaccione and Wahler's study (1986) with non clinical younger children from a socioeconomically disadvantaged population.

Measures

a) The Mother's Ecosystem Measures

Beck Depression Inventory (BDI; Beck et al., 1961; Beck and Steer, 1984). This inventory is a 22 item self-report questionnaire that requires the mother to rate each item in reference to her current feelings and mood. The BDI's psychometric properties have been established in previous studies (Beck, Steer & Garbin, 1988; Steer & Beck, 1988).

Community Interaction Checklist (CIC) developed by Wahler, Leske and Rogers (1979). It is an interview format where the mother specifies the quality of each remembered social exchange with adults during a time frame of the previous 24-hours. The mother also reports her spousal interchanges and the valence category for each. The rate goes from -3 (very aversive) to +3 (very pleasant). For the purposes of this study only the average valence was relevant. Likewise the rates were transformed into a 7-point scale from 1 (very aversive) to 7 (very pleasant) in order to avoid the minus values and to reserve "0" for the cases reporting no contact. The CIC's psychometric properties have been established in previous studies (for a review, see Cerezo, 1988a).

Socioeconomic Disadvantage Index. (SED). It includes six items: family income, the mother's educational attainment, number of children, marital status, residential address, and self-referral versus other-referral.

b) Observational Measures

Standardized Observation Codes-Revised. (SOC-R) This is an observational coding package developed by Cerezo, Keesler, Dunn and Wahler (1986) that has been translated to Spanish by the first author (Cerezo, 1991). The coding system allows the sequential recording of social interaction within a family setting because the codes are defined in mutually exclusive categories. In a regular session, valence, frequency, duration and sequence of family interchanges with a given target child are coded. The codes categorise interactional and non-interactional behaviors for all of the observed interactors. There are a number of studies supporting the reliability and validity of measures provided by the SOC-R, in both its original English version and Spanish translation (i.e., Cerezo, 1988b; Pons & Cerezo, 1991; D'Ocon, Pons-Salvador, Cantero & Frias, 1993).

Observers were undergraduate students trained at the University of Valencia, Aggression and Family Research Unit, in a 16-hour intensive course with

an additional 9 hours of practice in a natural setting following the training format specified in Cerezo (1991). The observers watched and coded videotapes of natural mother-child and sibling interactions. The tapes presented were arranged in sequences of increased length and complexity. By the end of training, the observers were expected to have obtained a satisfactory level of reliability. This was achieved by computing, on two occasions, the interval-by-interval agreement to a prescored key. For low frequency codes an accuracy level above 80% was required, and for codes whose frequency allowed the computation of kappa (Cohen, 1960), a coefficient of .55 or up was required.

The following measures were derived by grouping some SOC-R codes:

- Maternal aversive response (M-). This measure included the rate of Maternal Aversive Approach (MA-) - plus the rate of Maternal Aversive Instruction (MI-). Both categories are defined in a mutually exclusive way in the coding system. Negative valence is applied when the mother displays anger, verbally or physically, in her interaction. The measure was quantified as rate per minute.
- Child deviant behavior (Ch-). This measure included six codes: negative social approach, complaints, rule violation, negative instruction, neutral opposition, and negative opposition. Instances of any of these codes during the session were added and then the obtained total frequency divided into the time of the observational session to compute the rate per minute of Ch-. In all the rates per minute, the used divisor was the "real time" of the observational session. If the child had been out of vision (i.e., went out to other room looking for something) and/or the observer had missed data for a brief moment (usually no more than one minute per entire session), this time was subtracted from the regular 60 minute period, and the result was considered the "real time".
- Maternal inappropriate response after the child's prosocial behavior (MIND+). A ratio of child-mother pair behavior instances, previously defined as inappropriate, over appropriate plus inappropriate was computed. Pairs were defined in terms of the categories of SOC-R (Soler-Boada and Cerezo, 1991). For example, if the child is playing and the mother approaches him in a way scorable as aversive, that is considered an instance of inappropriate mother response to positive child behavior. If the child is playing and the

mother approaches him in a neutral way, that is considered as an instance of appropriate maternal response. This ratio may be considered an index of the mother's mistakes as a competent caregiver given that the child was behaving in a positive way. A lower ratio value means a lower number of mistakes in the child-mother exchanges, and a more discriminative mother's behavior in relation to her child's prosocial conduct.

The behavioral category rates, child-mother behavior pairs, and ratios were computed by ARINFA (Soler-Boada, 1991) which is a commercialized software package for Apple Macintosh devised to analyze SOC III observational data. (For a detailed description of the computational procedures see ARINFA User's Guide, Soler-Boada & Cerezo, 1991).

c) Maternal Report Measures.

Mother's observational report. (MOR). This measure was obtained by the observer once CIC's session was finished by asking the mother to rate about her child's behavior during the preceding hour in a 7-point scale from 1 (very good) to 7 (very bad). This measure was used as a index of mother's proximal perception

Child Behavior Checklist (Achenbach & Edelbrock, 1983). This inventory consisted of 113 items about child problems. The parent is asked to rate how often or how intensely the problem applied to her child from 0 (never) through 1 (sometimes) to 2 (very often). The psychometric properties have been established by previous studies (Achenbach, 1988). For the purposes of our study only the externalizing score was used (CBC.E).

Design

The first set of analyses were related to the maternal perception. The maternal judgment of the child's externalizing behavior problems through the checklist CBC.E and of the child's deviant behavior through the scale rating MOR constituted the criterion variables for two stepwise regression analyses. The predictors in both analyses were the ecosystem variables (SED, BDI, CIC.val) and Ch- and M- rates coded by an observer.

In the prediction of the MOR the analysis included the observational rates that were obtained in one given session: the proximal session was scored

within 72 hours of the mother's community social interaction report.

In the prediction of CBC.E, the observational predictors were Ch-'s and M-'s baseline average rate for each subject.

The second set of analyses were related to the maternal behavior. The indiscriminate maternal reaction to child prosocial behavior (MIND+) was the criterion variable for two stepwise regression analyses. In both analyses the mother's ecosystem indices (SED, BDI, and CIC.val) were again used as predictors.

The first analysis was aimed at predicting the indiscriminate reaction displayed by the mother on *proximal day*, the very specific time frame within which she had reported the quality of her extrafamily social contacts. The rate of Ch- scored by an independent observer in that session and the Mother's Observational Report (MOR) for that period of time were also included as predictors in this analysis.

In the second analysis the criterion variable was the average of MIND+ across all the baseline sessions. The average rate of Ch- in baseline, and the mother's report of her child's behavior problems through the CBC score for the externalizing problems were also used as predictors in this analysis. For this analysis the use of the average rate for the observational measures across all baseline sessions was considered more appropriate given that the checklist requires that the mother aggregates her perceptions of the child over a longer period of time.

Results

Observer Reliability

An additional observer accompanied the regular observer at least once during the baseline period to check reliability. The measure used in the analyses were based on total session score. Therefore, the pairs of total scores produced by the two observers were intercorrelated. Pearson r 's were obtained for the following code composites: Child aversive behavior (Ch-) = .93, ($p < .001$) Mother aversive behavior (M-) = .83 ($p < .001$); and Maternal indiscriminate behavior after child prosocial behavior (MIND+) = .98 ($p < .001$). These correlation coefficients indicated a satisfactory observer agreement for the observational measures used in this study.

Relationship Between Child's Aversive Rate (Ch-) and Maternal Aversive Behavior (M-)

An expected lack of association was found between aversive child behavior and maternal child-directed aversive response. With proximal session, the raw bivariate correlation between these two predictors was -.06. Likewise the raw bivariate correlation between the baseline average rates of Ch- and the M- was non-significant: $r = .25$.

Maternal Perception

Prediction of Maternal Observational Rating (MOR) of Child's Deviant Behavior during Proximal Session

Using the five predictor variables described earlier, a stepwise regression analysis was conducted with the maternal rating of the deviance displayed by the child during a precedent one-hour observational session as the criterion variable. Within this specific time frame, the child's rate of deviant behavior was the best predictor of MOR. This result was expected. Contrary to the expectations, the final equation did not include any other predictor relating to the mother's ecosystem quality. This one-variable model was statistically significant ($F_{(1,19)} = 5.62$; $p < .03$) and accounted for 23% of the variance.

Prediction of Maternal Report of Child Externalizing Problems (CBC.E) for the Baseline Period

The criterion variable for this stepwise regression analysis was the child's externalizing problems reported by the mother (CBC.E score). Results showed a two-variable model to be significant ($F_{(2,18)} = 4.43$; $p < .05$). This model accounted for 33% of the variance. The best predictor was the average of M- in baseline which explained the 25% of the variance in CBC.E's score. The second predictor was the average quality of the mother's social contacts. The child's deviant behavior rate did not contribute to the CBC.E's score variance, in spite of the fact that the codes which are included in the broad category of Ch- (rule violations, oppositional behavior, negative approaches and demanding behavior, and complaints) are behaviors sampled in the CBC items with important weightings in the externalizing factor.

Maternal Behavior

Prediction of Mother's Indiscriminate Response to Child's Prosocial Behavior (MIND+) in Proximal Session

With the predictors described above a stepwise regression analysis was conducted using the maternal indiscriminate response to the child's prosocial behavior in proximal session as the criterion variable. A significant five-variable model accounted for the 55% of the variance of MIND+ in proximal session ($F_{(5,15)} = 3.69; p < .025$). The Maternal Observational Rating (MOR) was the best predictor. The second three best predictors were the ecosystem's adversity indices: the mother's reported depressive symptomatology (BDI), the number of SED markers, and the average quality of the social contacts (CIC.val). The last predictor was the Ch- rate.

Prediction of Maternal Indiscriminate Response to Child's Prosocial Behavior (MIND+) for the Baseline Period

Using the baseline average of MIND+ as the criterion variable and the predictors described earlier a stepwise regression analysis was conducted. Results showed a three-variable model which accounted for 59% of the variance to be highly significant ($F_{(3,17)} = 8.13; p < .001$). The best predictor of MIND+ was the socioeconomic disadvantage markers (SED) which accounted for 25% of the variance. The second predictor was the BDI score and the third variable included in the model was the CBC.E.

Discussion and Conclusions

As expected, the findings suggest that the role played by the child's deviant behavior as a predictor is more important in the mother's specific report, the mother's rating of her child's behavior during the previous hour. However, the best predictors of the mother's more global judgment were both her actual aversive behavior and the setting factor, the perceived quality of social contacts. In addition, two unexpected results were found: First, the lack of contribution of any setting factor to the MOR and second the lack of contribution of the child's deviance to the CBC.E's score. It might be argued that setting factors do not show their influence when the mother is asked to rate her child's behavior during the observational session because the time frame is brief and specific. On the other hand, the mother's

judgment tends to be based on her own aversive behavior and her social contacts when the report requires her to aggregate her perception of the child over a longer period of time. To complete this descriptive picture, it is important to underline the lack of association between M- and Ch-, and the significant bivariate correlation between M- and CIC.val (Pearson's $r = -.40; p < .05$). Higher rates of M- were associated with less positive community contacts. Panaccione and Wahler (1985) used the MOR as criterion variable with non-clinical younger children (mean age = 4.35) from a socioeconomically disadvantaged population and found that the Ch- was the best predictor. They also found that the quality community contact predicts the MOR. This discrepancy may be due to the fact that our study used the MOR for a given session, proximal session, which was coded within 72 hours of the CIC report. In other words, our results were based on just one measure of this factor, while Panaccione and Wahler's findings are based on the average of four sessions.

Sansbury and Wahler (1990) also found an unexpected lack of influence of Ch- on the maternal summary or global reports which agree with our findings. However, this agreement must be cautiously considered because the summary report used in their study was not a checklist score. They also reported no influence of Ch- on the monitoring report. However, the measure for this specific report was quite different from the MOR. It is difficult to interpret these discrepancies because of methodological differences in these variables.

As expected with regard to the maternal behavior predictions, the findings indicate that ecosystem factors and maternal judgment predicted the mother's indiscriminate behavior following her child's prosocial behavior. When only the values for proximal session were considered, the MOR was the best predictor followed by the three ecosystem factors. The last predictor was Ch-. When the averaged values for the baseline were considered, the socioeconomic disadvantage was the best predictor of the mother's indiscriminate behavior followed by the ecosystem factors (except for the community contacts) and the summary report through the CBC.E's score. The two stepwise regression models accounted for an important amount of the variance in maternal indiscriminate behavior: 55% for proximal session and 59% for the entire baseline. Sansbury and Wahler (1990) reported comparable results, although this should be interpreted with caution given the methodological discrepancies mentioned above.

In conclusion, the findings showed that multi-stressed mothers' perception of their child's prob-

lems may reflect their own aversive child-directed behavior and setting factors when maternal report reflect an aggregate of the child's behavior over a long period – i.e. CBC.E. In addition, the proportion of maternal mistakes or mismatches with the children's behavior were shown to be mainly affected by her adverse ecosystem factors and her reports. In other words, setting factors and perceptual factors affect the *maternal indiscriminate behavior*. Finally, as expected, the maternal aversiveness showed no relation to her child's aversive behavior.

Our findings must be interpreted with caution because the ratio of predictor variables (5) to number of subjects (21) was high and because the mother's perceived quality of her social contacts was measured only once. The average of as many CIC's reports as observational sessions per subject would have provided a stronger variable. The few studies to date and the discrepancies in the ways of measuring the maternal perception of the child's problem make any intent to compare the findings very speculative. The reported findings need to be replicated. This must be considered a suggestive contribution, pointing out some promising directions for enlarging the focus from the dyadic exchange to a broader context of the mother-child relationship.

Perceptual and behavioral processes have a complex relationship which is not yet well understood, and their analysis becomes more complex when it involves mother-child exchanges. As Dumas and LaFreniere (1993) recently showed, a given mother-child exchange involves the current set of stimuli as well as the cumulative history of the dyad or a "relationship effect". In our opinion, maternal expectations and perception of the cues associated with past stressful interactions with the child play a role in this relationship effect. How can the maternal reports reflect this relationship effect and the ecosystem factors? How is the mother's perception biased and how does it affect maternal child care behavior? These are important questions of theoretical and clinical significance.

Further research is needed to clarify the role of the child's related stress factors (past and present) and the setting factors in both the perception and the behavior of the mother. The study of the role played by the setting factors in the dyadic exchanges enlarges the focus to a more complex interpretation and it has important implications for child developmental psychopathology and family process.

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