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MOTHER - AND FATHER-INFANT FEEDING INTERACTIONS IN FAMILIES WITH PARENTS WITH BED

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Abstract

Several studies demonstrated that the quality of dyadic interactions during feeding has an impact on offspring’s psychopathological problems in families where parents have a psychiatric diagnosis. Although literature addressed the trans-generational transmission of psychopathology from parents with eating disorders to their offspring, the specific quality of parent-infant interactions during feeding has not been assessed. The purpose of the study was to assess possible differences in the quality of mothers-children and fathers-children feeding interactions at 36 months of age of the child in families with parents diagnosed with binge eating disorders (BED). The sample was composed by 30 Italian couples of parents and children (Ntot =90), divided into three groups based on the presence of BED diagnosis. Group A: diagnosis in both parents; Group B: diagnosis only in the mothers; Group C: diagnosis only in the fathers. For the evaluation of feeding dyadic exchanges SVIA Italian adaptation of the Feeding Scale was applied. Parent-infant interactions in families with parents diagnosed with BED show maladaptive features. Mothers and fathers relate to children in a not overlapping fashion, with mothers showing various maladaptive symptoms and fathers showing severe conflicts with the children during the meal. Primarily reducing parental symptoms is relevant in term of mental health prevention programs.

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1. Introduction

The relational processes represent a core aspect for the evaluation and prevention of vulnerabilities and psychological distress in infants and in their parents during childhood. Among the various typical issues of the family relationship during developmental age, infant feeding is a key activity in the mother-child dyad. Indeed, as known, nutrition represents a very important social behaviour as it characterizes one of the first forms of interaction activities (Beebe & Lachmann, 2001; Stern, 1985).

There is a general consensus that adult-child interactions, such as during feeding, play a crucial role in shaping offspring’s mental health. Indeed, in general, the relevance of caregivers-infant daily interaction on children psychological well-being has been acknowledged and empirically supported in international literature (Beebe & Lachmann, 2001; Chatoor, 1997; Cohn & Tronick, 1989; Kaye, 1982). Various clinical guidelines and evidence from observational studies have indicated that nursing is characterized by specific and rhythmic pattern, namely "turn-taking" (alternating turns), that especially refers to a broader complex context of social interaction (Kaye, 1982; Stern, 1985). Moreover, as highlighted by some international authors, these forms of affective and social interactions (real “social dialogues”) could hampers the development of the rhythms of verbal dialogue and social interaction (Ammaniti, Ambruzzi, Lucarelli, Cimino, & D’Olimpio, 2004; Kaye, 1982; Stern, 1985).

In accordance with the theoretical and empirical framework of Infant Research (Cohn & Tronick, 1989; Stern, 2010), the infant engages in bidirectional communication, showing an innate competence in daily interactional exchanges with primary caregivers, particularly in feeding contexts. Still within this framework, Stern (2010) consistently showed that dyads instinctively regulate their bidirectional communications differently. Furthermore, other authors highlighted how repetitive “mismatch” between parents and their children, that is failure in sharing empathic and sensitive interactions, could lead to infant’s maladaptive emotional and behavioural symptoms over time (Beebe & Lachmann, 2001; Cohn & Tronick, 1989).

Regarding to parental contribution, both mother and fathers in their shared experience of co-parenting, are often indicated as having a key role in facilitating the involvement of the children in the communicative exchange, identifying themselves in empathic way with offspring’s moods, and offering communication strategies adapted with rhythmic and prosodic variations (Stern, 1985).

Due to the complexity of the phenomenon of nutrition during childhood, transitional feeding difficulties can be frequently observed: they often seem to be temporary problems, quickly resolvable, but just as often, feeding serious problems raise, consisting in an inadequate food intake, with a failure to thrive (failure to thrive), or stunted (growth stunting) (Chatoor, 1997; Sameroff, 1983).

2. Problem Statement

Among the causes of feeding difficulties in children, parental psychopathology (e.g., depression, anxiety, and eating disorders) is often reported. Indeed, consistent research data showed that children’s eating difficulties were associated with anxiety and worry in parents, and that some dysfunctional aspects of the parent-infant relationship can seriously affect the child’s self-regulation of affections and his/her
nutritional capacity (Ammaniti et al., 2004; Ammaniti, Lucarelli, Cimino, D'Olimpio, & Chatoor, 2010; Chatoor et al., 1997).

The clinical and empirical literature in the field of infants’ eating disorder has especially examined the link between parental psychopathology and offspring’s maladaptive emotional and behavioural symptoms, demonstrating that parents’ (especially maternal) non-responsiveness, due to their own psychopathological problems, interacting with infants’ characteristics (e.g., a difficult temperament), could make difficult in offspring’s psychological balance (Ainsworth, Bell, & Stayton, 1991; Sroufe 1985). Depending on the different form of difficulties, the outcomes may include both internalizing and externalizing symptoms (Field, 2000). Furthermore, recent research indicated that parental severe and/or chronic psychiatric diagnosis might be a predictor of their children’s psychopathology (Dietz, Jennings, Kelley, & Marshal, 2009).

3. Research Questions

Taking into account the above-mentioned considerations, we acknowledge that the quality of dyadic interactions during feeding, representing the characteristics of the entire parent-infant relationship, has a crucial role in the transmission of psychopathological risk between parents and their children (Chatoor, 1997), especially in families where parents have a psychiatric diagnosis. Hence, the necessity of increasingly examine the emotional and environmental experiences of children during nutrition, to address psychological dynamics within the child-caregiver relationship.

Furthermore, to the best of our knowledge, although literature addressed the trans-generational transmission of psychopathology from parents with eating disorders to their offspring, the specific quality of parent-infant (mother – and father) interactions during feeding has not been assessed.

In this regard, the role of fathers appears still too little estimated. Indeed, to our knowledge, only few study investigated the role of father’s psychopathological profiles on onset and maintenance of emotional behavioural problems in offspring, focusing on parent-infant daily interactions (Cerniglia, Cimino, & Ballarotto, 2014; Cimino et al., 2016a; Cimino, Cerniglia, & Paciello, 2015).

4. Purpose of the Study

The current study aimed at investigating parent-child relationship dynamics in families with parents diagnosed with binge eating disorders (BED). More specifically, the purpose of this work was to explore the link between mother and father psychopathological profiles and their children emotional-adaptive functioning, examining mother-child and father-child relational dyadic patterns at 36 months of age of the child.

According to Infant Research theory and consistent with a large amount of empirical work, we hypothesized that maladaptive caregiver-infant interactive patterns, which characterize a parental style during daily feeding interactions, occur in families with parents diagnosed with binge eating disorders (BED), probably related to severe emotional-behavioural functioning’s impairment in children. Thus, we generally suppose a children’s maladaptive psychopathological functioning in presence of BED parental psychiatric diagnosis, considering the parental interactive patterns.
In other words, we expected that parental diagnosis of BED would act as a risk factor that relates to the children’s likelihood of experiencing psychopathological problems overtime. In this regard, we also expected that offspring of parents who were both diagnosed with BED exhibit psychological problems than children with only one parent with BED.

Our first specific objective in this study was to explore the emotional and behavioural functioning in children of parent diagnosed with BED. The second specific goal was to assess the quality of mothers-child and fathers-child feeding interactions, focusing on possible differences between parents in conducting interactive exchanges with their children. More specifically, in the supposed maladaptive quality of parent-child interactions, due to their own parental psychopathology, we intend to point out some differences in mother-child and parent-child interactions.

5. Research Methods

5.1. Subjects and procedure

We conducted a cross-sectional study on the quality of parent-infant interactions during feeding in families with parents diagnosed with binge eating disorders (BED). 30 Italian couples of parents, aged between 25-45 years, and their children 36 months old (Ntot =90) were enrolled. The subjects were recruited from an Italian program for prevention of psychopathological problems in offspring of parents with psychiatric diagnoses. The majority of them were Caucasian. Moreover, all participants came from families with middle or high socioeconomic status. An informed consent form was distributed to parents. None of the parents refused to participate in the study. All of them completed the relative informed consent form. Only children without developmental disorders were included in the study.

Based on the presence of BED diagnosis in parents the whole sample was divided into three groups. Group A, included 20 couples and their children (children’s average mean 18.99; s.d. 2.43) - diagnosis in both parents; Group B, included 20 couples and their children (children’s average mean 19.63; s.d. 1.40) - diagnosis only in the mothers; Group C, included 20 couples and their children (children’s average mean 19.96; s.d. 2.38) - diagnosis only in the fathers. The children’s gender was balanced between males and females in each group.

To address our research goals, we acknowledge that an observational measure of dyadic behavioural and emotional exchanges in the first years of life it’s very relevant to understand the interactive patterns (Chatoor et al., 1997). Thus, for the evaluation of feeding dyadic exchanges in the current study we adopted the SVIA Italian adaptation of the Feeding Scale, which was developed by Lucarelli et. al. (2002). Moreover, to verify the children’s emotional-behavioural characteristics a report-form instrument was used.

The parent-child feeding interactions were video-recorded during a main meal in the home. The dyadic exchanges were secondly coded using the SVIA Italian adaptation of the Feeding Scale. Parents were also independently administered a questionnaire on their children’s behaviour.

Prior permission was obtained from the Ethical Committee of the Medicine and Psychology Faculty at Sapienza, University of Rome, in accordance with the Declaration of Helsinki.

The following tools were administered by trained psychologists.
5.2. Measures

Evaluation of feeding dyadic exchanges

Scala di Valutazione Interazioni Alimentari (SVIA)

The S.V.I.A. - Scala di Valutazione dell’Interazione Alimentare Madre-Bambino (Lucarelli et al., 2002), is an Italian adaptation of the Feeding Scale-Observational Scale for Mother-Infant Interaction during Feeding, developed by Chatoor et al. (1997). The SVIA is a scale designed to evaluate the dyadic exchanges between mother and infant in a feeding context, with children 1–36 months old. Although this measure originally aimed to assess mother-child interactions, currently it can also be used for the evaluation of father-child feeding interactions (Grava, Lucarelli, & Ammaniti, 2014).

The SVIA comes in the form of check lists to be applied to the video-recorded adult-infant interactions (lasting 20 minutes). It investigates interactive behaviours, allowing the identification of normal, risky interactive patterns or feeding disorders in early childhood. The instruments consists of 41 items included in four subscales: 1) parent’s affective state; 2) interactive conflict; 3) food refusal behaviour; 4) dyad’s affective state.

The scale has good internal consistency (Cronbach’s α, 0.79–0.96).

Evaluation of emotional-behavioural functioning

Child Behaviour Checklist (CBCL 1½–5)

The Child Behaviour Checklist (CBCL 1½–5; Achenbach & Rescorla, 2001; Italian version by Frigerio & Montirosso, 2002) is a report form scale used to evaluate children psychopathological problems. It contains 100 items to assess the child emotional and behavioural functioning in different areas of daily functioning (age range: 18–36 months). The items are scored on a three-point scale (three alternative answer: not true, somewhat or sometimes true, very true or often true).

The instruments measures three different symptomatic scales: Internalizing scale, Externalizing scale, and Neither Internalizing Nor Externalizing scale. The Internalizing scale includes various psychopathological problems, such as Anxious/Depressed, Withdrawn, Somatic Complaints, while the Externalizing scale measures Attention Problems and Aggressive Behaviour.

The instrument shows a good internal consistency (Cronbach’s α, 0.65 to 0.96).

5.3. Statistical analysis

To assess the presence of psychopathological problems in offspring of parents with BED we carried out multivariate analyses of variance (MANOVA) on the data in the CBCL DSM-oriented scales in all three groups, considering the effects of age and gender (to respond to first objective). The variable group consisted in the between-subjects factor (GA vs. GB vs. GC). To examine the quality of the interactional patterns between mothers and children and fathers and children during feeding we carried out multivariate analyses of variances (MANOVAs) on the SVIA dimensions (to respond to second objective). To evaluate the correlations between the BED diagnosis in parents, child psychopathology and quality of feeding interactions, the Pearson’s product-moment correlation coefficient was used. In all the analyses we conducted, the child’s gender showed no significant effect on the variables. All data were performed with IBM SPSS software (version 23.0).
6. Findings

6.1. Children’s emotional-behavioural profiles

With regard to the assessment of children’s psychological symptoms, a MANOVA was conducted on three groups on CBCL scales to verify whether children of parents diagnosed with BED showed maladaptive emotional-behavioural functioning. Analyses showed a Group effect ($\lambda = .229; F= 25.450, p = .000$). The analysis revealed a statistically significant effect on all the CBCL DSM-oriented scales administered. According to our hypothesis, children of parents both diagnosed with BED reported high levels of psychopathology, especially regarding to affective problems ($F= 60.50, p = .000$), anxiety problems ($F= 86.22, p = .000$) and oppositional defiant problems ($F= 45.88, p = .000$).

6.2. Quality of mother–child and father–child interactions during feeding

With respect to the assessment of the mother–child and father–child interactions during feeding, MANOVA analysis of the observational scale during feeding showed general maladaptive interactional patterns that are established between parents and child during their daily interaction.

More particularly, mothers diagnosed with BED showed high scores on the Mother’s Affective State and Interactive Conflict dimension. Fathers with BED tended to have more interactive conflict with their children compared with mothers with BED. Moreover, mothers’ and fathers’ scores were significantly higher than those showed by only one parent diagnosed with BED, in all dimensions ($p < .01$). Indeed, both mothers and fathers diagnosed with BED showed poor quality in feeding interactions with their child. In this regard, differences between mother- and father-infant feeding interactions were relevant. Mothers with BED reported difficulties in showing positive affects and a higher frequency of negative affects such as sadness or distress. Fathers with BED showed intensity of conflictual exchanges within the dyad, expressing severe distress and discomfort when facing feeding routines with their children.

Table 1 reports mean scores and standard deviations of the SVIA subscales for mother-child interactions.

Table 01. Statistics of the SVIA scores of mother-child feeding interactions

<table>
<thead>
<tr>
<th></th>
<th>GA</th>
<th>GB</th>
<th>GC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mother’s Affective state</td>
<td>22.21 (2.51)</td>
<td>17.01 (2.09)</td>
<td>10.31 (1.76)</td>
</tr>
<tr>
<td>Interactive conflict</td>
<td>21.51 (1.89)</td>
<td>15.21 (0.98)</td>
<td>11.09 (2.11)</td>
</tr>
<tr>
<td>Food refusal behaviour</td>
<td>11.98 (2.01)</td>
<td>9.13 (2.32)</td>
<td>6.49 (2.17)</td>
</tr>
<tr>
<td>Dyad’s Affective state</td>
<td>13.61 (2.31)</td>
<td>8.98 (1.01)</td>
<td>6.44 (3.19)</td>
</tr>
</tbody>
</table>

GA = both parents diagnosed with BED; GB = mother diagnosed with BED; GC = father diagnosed with BED

Table 2 indicates mean scores and standard deviations of the SVIA subscales for father-child interactions.
In order to explore the association between parental BED diagnosis, child psychopathology, and quality of feeding exchanges the Pearson’s product-moment correlation coefficient was performed. An interaction effect between both parental diagnosis of BED, the CBCL scales and SVIA scores was evidenced (p < .01).

### 7. Conclusion

The main aim of the present study was to verify how parent-infant interactions during feeding might be linked to children’s well-being impairment, in families with parents diagnosed with BED, considering both mother-infant and father-infant exchanges. To our knowledge, no study on this topic took place yet.

Since having parent with a psychiatric diagnosis represents a risk factor for early developmental emotional/behavioural problems (Cimino et al., 2015; Murray, Halligan, & Cooper, 2010), we expected that maladaptive parent-infant interactions during feeding in families with parents diagnosed with BED would be linked to low levels of emotional and behavioural functioning in children; as well as we expected that some difference in the quality of mothers-children and fathers-children feeding interactions should be present.

Our findings generally support these predictions. The results of the current study show also within our sample a high prevalence of children’s emotional-behavioural problems and of maladaptive interactive exchange between parents and offspring. Overall, our findings are consistent with previous research in showing high rates of psychopathological symptoms in children of parents with psychiatric diagnosis, suggesting a negative effect of parental eating disorders on their offspring’s mental health (Cerniglia et al., 2014; Cimino et al., 2015; Cimino et al., 2016a). Moreover, parent-infant interactions in families with parents diagnosed with BED show maladaptive features. Mothers and fathers relate to children in a not overlapping fashion, with mothers showing various maladaptive symptoms and fathers showing severe conflicts with the children during the meal. A possible explanation is that fathers show serious problems in relating to their children owing to their own difficulties in regulating hunger, satiety and eating pace.

Defined in this way, the relational context in families with parents diagnosed with BED has been found to be severely compromised. Consequently, parent-infant interactions in risk environment need to be study with more special attention. In this regard primarily reducing parental symptoms is relevant in term of mental health prevention programs. Indeed, verifying that maladaptive pattern characterizes the

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**Table 02.** Statistics of the SVIA scores of father-child feeding interactions

<table>
<thead>
<tr>
<th></th>
<th>GA</th>
<th>GB</th>
<th>GC</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mother’s Affective state</strong></td>
<td>22.31 (2.58)</td>
<td>10.23 (1.79)</td>
<td>18.02 (3.41)</td>
</tr>
<tr>
<td><strong>Interactive conflict</strong></td>
<td>21.01 (2.73)</td>
<td>12.19 (2.15)</td>
<td>17.16 (3.88)</td>
</tr>
<tr>
<td><strong>Food refusal behaviour</strong></td>
<td>12.35 (3.01)</td>
<td>7.55 (3.41)</td>
<td>11.21 (2.11)</td>
</tr>
<tr>
<td><strong>Dyad’s Affective state</strong></td>
<td>12.31 (2.77)</td>
<td>7.08 (2.34)</td>
<td>9.79 (2.51)</td>
</tr>
</tbody>
</table>

GA = both parents diagnosed with BED; GB = mother diagnosed with BED; GC = father diagnosed with BED
relationship between parents diagnosed with BED and their children at 36 months, our data are consistent with those of previous studies that argued that psychiatric disease in parents lead to offspring’s uneasiness, which could crystallize into early psychopathological symptoms (Cimino et al., 2015; Cimino et al., 2016a). Even more so, findings in the current study turn out to be very important in relation to child mental health, since early children’s emotional and behavioural difficulties in the first years of life tend to increase overtime (Ammaniti, Lucarelli, Cimino, D’Olimpio & Chatoor, 2012; Cimino et al., 2016b; Cimino et al., 2015).

Our results should be viewed in the light of several methodological limitations.

The findings should be confirmed in a future research including a larger sample. Indeed, our sample size limits the generalizability of the study. In addition, although we used an observational measure of dyadic behavioural and emotional exchanges together with a report-form instrument, future longitudinal studies to test the offspring’s difficulties overtime would be advisable.

Despite the abovementioned limitations, our study nevertheless confirmed that feeding interaction during early childhood is an important source of psychological dynamics within the child-caregiver relationship. Moreover, the use of video recording instrument such as SVIA allowed us to specifically observe the daily interactions between child and parents in a psychopathological risk environment.

Actually, our results evidenced that once we take into account contexts of feeding, assessing the quality of mother–child and father–child interactions, we gather crucial information about the parent-infant relationship and its implications for children mental health. Our results have also demonstrated that fathers engage in interactions with their children in a specific way. Thus, in our opinion, these findings would seem to suggest that the contribution of maternal and paternal parent figures must be further investigated. A productive focus for future research could better explore the weight of father’s psychological profiles on offspring’s early negative outcomes. To date we have no much data about this.

In finally conclusion, the result of the study might be the starting point for developing more systematic investigations in the field of relational dyadic pattern and for planning useful psychological support interventions.

References


