Abstract

Early maternal relational traumas can have an impact on mothers’ psychopathological risk and mother-infant interactions. Research has suggested the importance of fathers’ role as protection or risk factors for child’s development. Few studies had considered fathers in the assessment of the quality of parent-infants interactions during daily routines (e.g. feeding) and there is a lack of research on non-referred samples. This paper aims to assess the quality of parent-infant interactions during feeding in families with mothers who have experienced early relational traumas, such as emotional abuse and neglect or sexual/physical abuse, considering parental psychopathological risks. N= 98 families were recruited and divided into three groups: families with mothers who lived through early sexual/physical abuse (Group A); families with mothers who lived through early emotional abuse or neglect (Group B); healthy controls (Group C). Families were assessed at 6 months of the children with a protocol that included an observation of parent-infant interactions during feeding and a self-report assessing psychopathological risk. Group B showed more maladaptive mother-infants and father-infant interactions with their children. Results show that the interaction of maternal depression and early traumatic experiences of neglect and emotional abuse predicted more maladaptive scores on the affective state of the dyad subscale. Furthermore, paternal anxiety predicted higher scores of child’s food refusal subscales. These results are very important for the planning of prevention and / or treatment, which take into account of the whole family.

Keywords: Early maternal trauma; parent-infant interactions; parent psychopathological risk; observational tool.
(Muzik et al., 2013) during the transition to motherhood, considered a critical period (Slade, Cohen, Sadler, & Miller, 2009). It has been found that abuse experienced by the mothers in their first 5 years of life can favor depression, anxiety, post-traumatic stress disorder (PTSD) (Kennedy, & Tripodi, 2014), and sleep disturbances, as well as a loss of interest and difficulties to concentration (Bonari et al., 2004).

2. Problem statement

Mothers who experienced RTEs could show psychopathological symptoms that can be associated with poor cognitive and social outcomes in their children (Grace, Evindar, & Stewart, 2003), inadequate self-regulatory capacities and anxiety (Cimino, Cerniglia, & Paciello, 2015; Goodman, Miller, & West-Olatunji, 2012; Paciello, Fida, Tramontano, Cole, & Cerniglia, 2012). Psychopathological risk emerged following traumatic events can be transmitted to offspring, both behaviorally/emotionally and genetically (Kim, Fonagy, Allen, & Strathearn, 2014).

Recent studies have been shown that mothers who experienced traumatic events are more likely to have hostile/intrusive parenting behaviors (Lyons-Ruth, & Spielman, 2004) over time and have children with internalizing and externalizing problems (van Ee, Kleber, & Mooren, 2012). Brazelton and colleagues (1974) found that these interactions are characterized by emotional unavailability during daily routines such as feeding or breast-feeding (Tronick, & Weinberg, 1997; Diego, Field, Jones, & Hernandez-Reif, 2006).

Despite many studies have underlined that parent-infant interactions during the feeding of the child may be considered important (Oppenheim, Koren-Karie, & Sag-Schwartz, 2007) to assess the quality of these relationships, most studies have evaluated play routines, whereas only a few have observed feeding interactions (Blissett, 2011). Has been suggested that the intersubjective process during feeding represents a basis for emotional/behavioral functioning and attachment quality (Braungart-Rieker, Garwood, Powers, & Wang, 2001).

Recently, the fathers’ role has also been addressed as a protective or risk factor for the onset of psychological problems in children (Cerniglia, Cimino, & Ballarotto, 2014; Cooper, Murray, & Halligan, 2010); this is due to changes in the families’ organization, which nowadays include shared responsibilities between parents in the rearing of children (e.g., in feeding and sleeping routines) (Cimino et al., 2015). Lamb (2010) suggested that father-child interactions differ from those with mothers; fathers’ relational patterns with their children, in fact, are more often characterized by physical contact and rough-and-tumble play; these characteristics seem to have a specific role in supporting the child’s emotional-regulation processes (Dietz, Jennings, Kelley, & Marshal, 2009).

3. Research questions

On the base of the present literature, it appears important to consider fathers in the studies that assessed the quality of parent-infant interactions. Researches that considered the fathers’ role in children’s developmental and psychological outcomes, using observational tools with daily routines (e.g., play and/or feeding) are few (Field, 2010).
Moreover, there is a lack of research on non-clinical populations, whereas in clinical samples the interactions between parental psychopathological risks, their traumatic experiences, and children’s psychological functioning have been largely studied (Madigan, et al., 2014).

4. Purpose of the study

This study aims to assess the quality of parent-infant interactions during feeding, with children at ages 6 months, in families with mothers who have experienced RTEs, such as physical/sexual abuse and emotional abuse/neglect (as defined by D’Andera, Ford, Stolbach, Spinazzola, & van der Kolk, 2012) in the first 5 years of life, considering parental psychopathological risks. To this end, the sample was divided into three groups: families with mothers who have experienced physical/sexual abuse (Group A); families with mothers who have experienced emotional abuse/neglect (Group B); and families with mothers who have had no traumatic experiences (Group C). This study intends to verify whether women who have lived through early RTEs, but did not suffer from psychiatric disorders in their life histories, could be at risk for the onset of psychopathological symptoms during the transition to motherhood, as well as difficulties in their interactions with their children. Has been hypothesized that maternal RTEs could affect the quality of parent-infant interactions, in association with specific maternal psychological profiles (Cimino, Cerniglia, Paciello, & Sinesi, 2013; Cerniglia, Cimino, Ballarotto, & Monniello, 2014); furthermore, has been assumed that different maternal RTEs could be associated with different difficulties in parent-infant interactions.

The specific objectives of this study were: (a) to assess the quality of relational mother-infant and father-infant interactions during meals, in the three groups; (b) to assess parental psychopathological risk in the three groups; (c) and to verify whether maternal RTEs affected the quality of parent-child interactions during feeding, considering parental psychopathological risks.

5. Research methods

5.1. Subjects and procedure

The sample was composed of N=98 families who addressed a group of gynecologic services in north-central Italy during women’s pregnancies. In accordance with the gynecologists, has been administered, to both mothers and fathers starting at the fourth month of pregnancy (T0), a research protocol composed by Symptom Checklist-90-item- Revised (SCL-90-R; Derogatis, 1994) and an anamnestic questionnaire addressing potentially traumatic experiences lived. For the present study, has been considered mothers who have experienced only RTEs and families in which women did not have traumatic experiences. Exclusion criteria were: families who had other children; parents who exceeded the clinical cut-offs of SCL-90-R (Prunas, Sarno, Preti, Madeddu, & Perugini, 2012) or had been diagnosed with psychiatric disorders in the past (according to DSM-5 criteria; American Psychiatric Association, 2013). After the delivery, has been excluded families where mothers and fathers were not personally handling the child’s care and nutrition.

In the sample group (N = 98), no father reported potentially traumatic experiences, and the subjects are divided into three groups: Group A (N= 32; families with mothers who have experienced
physical/sexual abuse); Group B (N= 32; families with mothers who have experienced emotional abuse/neglect); and Group C (N= 34; families with mothers who have had no traumatic experiences).

At 6 months of children’s age, has been administered (independently to mothers and fathers) the SCL-90-R and the SVIA (Scala di Valutazione dell’Interazione Alimentare; Lucarelli, et al., 2002). These instruments are described below. Has been also administered the same anamnestic questionnaire, used at T0, and no parent reported having traumatic experiences between T0 and T1. Eighty-nine percent of the families recruited for the study had a middle socio-economic status, 93% of the families were Caucasian, with 75% relied on more than one income. All the babies were breast- and formula-fed (mixed-fed), and both mother and fathers personally handling the child’s care and nutrition.

Before the start of the study and in accordance with the Declaration of Helsinki, the research described was approved by the Ethical Committee of the Psychology Faculty at Sapienza, University of Rome. Written informed consent was obtained from each of the study participants.

5.2. Measures

At T0 and T1, has been administered the SCL-90-R (Derogatis, 1994), both to mothers and fathers, independently.

The Symptom Check-List (SCL-90-R) is a 90-item self-report symptom inventory. The SCL-90-R measures psychological symptoms and psychological distress (Derogatis, 1994). It is composed by 9 symptom dimensions: Somatization, Obsessive-Compulsivity, Interpersonal Sensitivity, Depression, Anxiety, Hostility, Phobic Anxiety, Paranoid Ideation, and Psychoticism. The Italian validated version of the SCL-90-R has been shown to haven a good internal coherence ($\alpha$ coefficient=0.70–0.96) in adolescents and adults (Prunas et al., 2012).

Moreover, mother-infant and father-infant nutrition interactions were video-recorded at T1, and the SVIA was applied to the video.

The SVIA is the Italian adaptation of the Feeding Scale (Chatoor et al., 1997). It can be applied to children from birth to 36 months old. SVIA measures parent-infant interactive behaviors during feeding and identifies normal and/or risky relational modes. Parent-child interactions were observed in their homes during lunch and recorded (20-minute videos). Mother-infant interactions and father-infant interactions were observed separately, in two different days. The videos were recorded by psychologists specifically trained in the use of SVIA and were coded by two trained independent raters (Lucarelli et al., 2002). The SVIA consists of 41 items distributed among four subscales: 1) parents’ affective states; 2) interactive conflict; 3) food-refusal behavior; and 4) affective state of the dyad. The scores for each subscale were compared with standard values from the Italian standardized sample. Inter-evaluator agreement for SVIA items is generally good to excellent. The instrument shows good reliability in terms of internal consistency (Cronbach’s alpha = 0.79–0.96) (Lucarelli et al., 2002).
5.3. Data analysis

Before running the analyses, variables’ normality was preventively ascertained and has been noted that all the variables were normally distributed. The three Groups were compared through analyses of multivariate variance (MANOVAs). Bonferroni’s post hoc tests were applied. Finally, two hierarchical regression analyses were conducted to investigate whether specific types of trauma (as physical/sexual abuse or emotional abuse/neglect) and psychopathological risk predicted relational patterns of the mother-infant and father-infant interactions. In all the analyses conducted, child’s gender showed no significant effect. All analyses were performed with SPSS software (Version 21.0).

6. Findings

6.1. Assessment of the quality of parent-infant interactions based on group

MANOVA conducted on SVIA subscale scores for mothers in Groups A, B, and C showed main effects of the groups (p< 0.001). Bonferroni’s post hoc tests took over that the mothers in Group B had significantly higher (i.e., more maladaptive) scores, than Group A on the mother’s affective state (F= 21.81; p< 0.001) and interactive conflict (F= 68.75; p< 0.001) subscales. All scores of SVIA subscales in Group C showed significant lower scores (i.e., more adaptive; p< 0.001) than other Groups.

MANOVA conducted on SVIA subscale scores for the fathers of Groups A, B, and C revealed main effects of the groups (p< 0.001). Results were similar to those of the mothers. Bonferroni’s post hoc tests took over that the fathers in Group B had significantly higher scores than Group A on the child food refusal (F= 199.724; p< 0.001) subscale. Fathers’ scores in Group C on all SVIA subscales were significantly lower (p< 0.05) than those of Groups A and B. Mothers’ and fathers’ average scores and exact p values (for significant differences) for each SVIA subscale are reported in Table 1.

<table>
<thead>
<tr>
<th>Table 1. Mean SVIA subscale scores (Standard Deviations) and p values by group for mothers and fathers.</th>
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<tr>
<td>Group</td>
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*Significantly higher scores.
**Group C show significantly lower scores than Group A and B on all SVIA subscales (p< 0.001).

6.2. Mothers’ and fathers’ psychopathological risk profiles, based on group

MANOVA conducted on SCL-90-R mothers’ subscale scores highlighted a main effect of the group (p< 0.001). Bonferroni’s post hoc tests showed that mothers in Group B had significantly higher scores than Group A on the Somatization (F = 7.91; p< 0.001), Depression (F= 8.56; p< 0.01), and Paranoid
Ideation (F= 8.96; p< 0.001) subscales. Mothers’ scores in these subscales exceeded the clinical cut-offs for the Italian population (Prunas et al., 2012). Mothers’ scores in Group C on all SCL-90-R subscales were significantly lower (p < 0.01) than those of other Groups.

MANOVA conducted on SCL-90-R fathers’ subscale showed an effect similar to those of the mothers, with a main effect of the group (p < 0.001). Bonferroni’s post hoc tests showed that fathers in Group B had significantly higher scores, than Group A on the Obsessive-Compulsive (F= 6.94; p< .001), Anxiety (F= 9.78; p< 0.01), and Hostility (F= 4.18; p< 01) subscales. Differently to mothers, no fathers’ scores exceeded the cut-offs for the Italian population (Prunas et al., 2012). The scores of the fathers in Group C on all SCL-90-R subscales were significantly lower (p < 0.01) than those in Groups A and B.

6.3. Assessment of the influence of maternal early trauma and mothers’ and fathers’ psychopathological risks on the quality of parent–child interactions during feeding.

Regression analyses were conducted separately for parents to evaluate the influence of maternal traumas and of SCL-90-R subscales on the relational dimensions of parent-infant interactions. Results highlighted that the interaction between higher maternal scores on depression and early traumatic experiences of emotional abuse and neglect, predicted higher (and more maladaptive) scores on the affective state of the dyad SVIA subscale (p< 0.01). Furthermore, the interaction between sexual/physical abuse experienced by the mothers in early childhood and mothers’ higher somatization scores predicted higher scores on the mothers’ SVIA affective state subscale (p< 0.05). Moreover, all type of early traumatic experiences in the mothers predicted higher (and more maladaptive) scores on paternal interactive conflict with the child during feeding (p< 0.05).

Regression conducted on the fathers showed that paternal anxiety predicted more severe food refusal in the child during feeding (p< 0.05).

Were no found associations or predictions between fathers’ psychopathological risks and maternal scores on the SVIA subscales. Results and values of the regression analyses are shown in Table 2.

Table 2. Results and Values of the Regression Analyses on mothers’ and fathers’ scores.

<table>
<thead>
<tr>
<th>SCL-90-R/Maternal Early Traumatic Experiences</th>
<th>SVIA Affective State of the Dyad (mother)</th>
<th>R²</th>
<th>β</th>
<th>T</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression • Neglect/Emotional Abuse</td>
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<tr>
<td>Mother</td>
<td></td>
<td>0.13</td>
<td>0.36</td>
<td>3.34</td>
<td>0.003**</td>
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<tr>
<td>Somatization • Sexual/Physical Abuse</td>
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<td></td>
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<tr>
<td>Father</td>
<td></td>
<td>0.07</td>
<td>0.25</td>
<td>2.35</td>
<td>0.031*</td>
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<tr>
<td>Neglect/Emotional Abuse and Sexual/Physical Abuse</td>
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<tr>
<td>Father</td>
<td></td>
<td>0.13</td>
<td>0.32</td>
<td>3.07</td>
<td>0.02*</td>
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<tr>
<td>Anxiety</td>
<td></td>
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<tr>
<td>Father</td>
<td></td>
<td>0.14</td>
<td>0.32</td>
<td>3.15</td>
<td>0.014*</td>
</tr>
</tbody>
</table>

*p < 0.05

**p < 0.01

*Association with.

The subscales that are not shown in the Table are not statistically significant.
7. Conclusions

This paper aimed to assess the quality of parent-infant interactions during child’s feeding, in families with mothers that had experienced early relational traumatic experiences in a non-referred sample. Initial hypothesis was that mothers with early RTEs could be at risk for the onset of psychopathological symptoms after their children’s birth. Has been hypothesized that these mothers could face difficulties in the interactions with their children of 6 months old. Moreover, has been verified if maternal RTEs could affect also the quality of father-infant interactions.

Results showed that mothers with early traumatic experiences (both emotional abuse/neglect and physical/sexual abuse) and their partners had more maladaptive interactions with their children during the feeding, respect to families with mothers who had not experienced traumas. In particular, mothers who had lived through emotional abuse or neglect showed higher scores on the affective state and interactive conflict subscales than mothers who had experienced sexual/physical abuse. This data highlighted that dyadic interactions were often characterized by feelings of sadness in the mother and by non-contingent interactions with her child. It is important to underline that mothers with early RTEs showed maladaptive interactions with scores similar to those of families with children diagnosed with feeding disorders (Lucarelli et al., 2002). This result is coherent with Kim, Trickett, and Putnam’s studies (2010) that found that maternal experiences of emotional abuse and neglect can severely affect the quality of their interactions with their children. It can be assumed that early maternal emotional abuse and neglect could have an impact more severe than other forms of abuse on mother-infants interactions affecting mothers’ perceptions of their competency in offspring-rearing, in particularly during feeding (Spertus, Yehuda, Wong, Halligan, & Seremetis, 2003).

As regard father-infant interaction, the same consideration can be apply. In this study, father-infant interactions were characterized by child’s food refusal. Considering the studies of Haycraft and Blissett (2012), the authors suggest that fathers tend to control child’s feeding more than mothers, imposing more pressure to the child in an effort to make him/her eat; in doing so, they could cause food-refusal behaviors in their children.

Moreover, results showed that in families with mothers who have lived through early emotional abuse and neglect, parents had a more severe psychopathological risks, than to other groups. In this group, mothers showed scores in somatization, depression and paranoid ideation, that exceeded the clinical cut-off for Italian population, whereas fathers had higher scores in obsessive-compulsive, anxiety, and hostility subscales than other Groups, but these scores not exceed the clinical cut-offs. Coherent with Pinquart and Teubert studies (2012), this result highlighted that mothers tend to show internalizing symptoms, while fathers are more likely to exhibit overt psychology difficulties.

Regression analyses showed that early maternal RTEs predicted more maladaptive paternal interactive pattern with the child characterized by interactive conflict. Coherent with family and ecological theories (Bronfenbrenner, 1979; Minuchin, 1974), it can be assumed, that mother-infant and father-infant dyads are interconnected, although no prediction was found between fathers’ psychological profile and father-infant interactions. Moreover, it has been found that the interaction of maternal depression and early maternal experiences of neglect and emotional abuse, predicted maladaptive scores on mothers’ SVIA subscale affective state of the dyad. This result underlined the
role of maternal psychological functioning on the quality of mother-infant and father-infant interactions (Tambelli, Cimino, Cerniglia & Ballarotto, 2015). As regard to fathers, data analyses found that paternal anxiety influenced child’s food refusal during feeding, coherent with Ramchandani’s study (2013).

The present study has several strengths. In fact maternal psychological functioning has been assessed prior to pregnancy, providing a baseline for mothers’ psychological profiles that differs from mothers’ scores on the same questionnaires after child’s birth. Moreover, has been evaluated the interactions between specific types of early maternal traumas and parental psychopathological symptoms on the quality of parent-infant interactions. Further, has been used an observational measure to assess separately the quality of mother-infant and father-infant interactions during feeding. Finally this study is focused on a non-clinical population, an important point for planning prevention and intervention programs.

This study had some limitations. Has been used self-report questionnaires (although strongly validated and largely used) for the evaluation of parental psychological profiles. Furthermore, has not been assessed children’s temperament and emotional/behavioral functioning. This variable could have a role on parental interactional styles. Finally, this study did not focus on family support and the homogeneity of the sample in terms of geographical and cultural, limits the generalizability of these results.

References


