

## **Intergenerational Transmission of Attachment. Family Interactive Dynamics and Psychopathology: What kind of Relationship in Adolescence?**

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### **Authors' contributions**

*This work was carried out in collaboration between both authors. Authors MG and PAB designed the study, wrote the protocol, and wrote the first draft of the manuscript. Authors AS and LS performed the statistical analysis. Authors IC, MS and LS collected data, managed database, managed the literature searches. All authors read and approved the final manuscript.*

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**Short Research Article**

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### **ABSTRACT**

**Introduction:** This work is an example of empirical research. The aim was to look to the possible transgenerational influence between parents and adolescents attachment bond to their respective parents, infant armonic and/or disarmonic development and functional or dysfunctional family interactions.

**Methodology:** 40 families with adolescents aged from 12 to 18 years ( $\mu = 14.575$ ,  $\sigma = 1.716$ ) coming for a psychodiagnostic evaluation were tested with Lausanne Trilogue Play, Parental Bonding Instrument, Child Behaviour Checklist and Youth Self Report. Hypothesis: a) Is there an association between the adolescent's perceived attachment relationship with his parents and his psychopathological symptoms? In this case a non parametric test for k independent groups was

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performed. b) Is there an association between parents-adolescent interactive dynamics and the parents' perceived attachment relationship with their parents (adolescent's grand-parents). In this case correlations and non-parametric test for k independent groups were performed.

**Results:** a) We found significant statistical differences ( $p < .05$ ) between adolescent psychopathology and the quality of perceived relationship with both the mother and the father. b) we found positive correlations between quality of relationship between the mother and her father (adolescent grandfather) and the scores of some LTP scales concerning normative function; moreover we found negative correlations between the father and his mother (adolescent's grandmother) and the scores of some LTP scales concerning affective function.

**Conclusion:** These results underline a significant association between the internal working model of the mother and her ways to interact and manage the relation with her adolescent son; this is a clinical evidence too. Another relevant result is the association between adolescent's psychopathology and his internal working model. Clinical applications regarding these findings should be taken in account when psychotherapeutically working with adolescents and their families.

*Keywords: Family interactions; lausanne trilogy play; adolescence; developmental psychopathology; attachment.*

## 1. INTRODUCTION

The role of relationships between adolescents and their adult reference figures, and their influence on adolescent development is a major clinical issue for psychologists and psychiatrists [1,2]. It is also a research topic of interest in several disciplines, including: Developmental psychology, social psychology, psychopathology, and clinical psychology. Attachment theory [3,4] is a point of convergence between the different theoretical approaches of these disciplines. Traditionally a secure attachment bond was associated to a parental sensitivity and ability to respond to the needs of the child [5-7]. The parent must rely on an emerging understanding of the child's mind in order to effectively engage with the child at the level of behavior. The several studies have focused on the link between the quality of the attachment bond and adolescent psychopathology. In the 1970s efforts were made in the infant research area to develop studies aiming to integrate dyadic and family points of view [8-10]. To date, few studies have concentrated on the influence of the various changes occurring in adolescence on family interactive dynamics [11-15]. Consistently with these studies, this work aimed to further analyze any influences/associations concerning the attachment bond between parents and adolescents, the quality of family interactive dynamics, and adolescent psychopathology.

## 2. METHODOLOGY

### 2.1 Research Context

This work took place within a bigger research project named "The Lausanne Trilogy Play

used as a psychodiagnostic and therapeutic tool at the Neuropsychiatric Unit: An innovative clinical experience working with psychiatric children and adolescents" and carried out at the Neuropsychiatry Unit for Children and Adolescents, ULSS 16, Padua (Italy). There, families are referred to for a clinical evaluation which means a psychodiagnostic assessment based on clinical interviews, tests' administration (Self-report questionnaires Youth Self Report, Child Behavior Checklist, Family Empowerment Scale, Parental Bonding Instrument, Questionari Italiani del Temperamento, Toronto Alexithymia Scale) and observing family interactive dynamics (LTP procedure, with video feedback sessions). The study sample is formed by those families who, after psychodiagnosis, are suggested about psychotherapy, divided into two groups: Group 1 contains families whose children are assigned to a course of psychotherapy; in Group 2 the child's treatment is associated with intervention to support parenting. Groups 1 and 2 have been randomly (according to the order of arrival to the service) divided into 2 subgroups:

- subgroups 1A and 2A: The LTP is administered every 6 months for 2 years after starting therapy, associated with video feedback on each occasion;
- subgroups 1B and 2B: The LTP is repeated every 12 months for 2 years and participants are given no video feedback.

#### 2.1.1 Sample of the study

40 families of adolescents aged from 12 to 18 years ( $M = 14.575$ ,  $SD = 1.716$ ), 23 boys (57.5%) and 17 girls (42.5%) taken from the both cited above groups.

### **2.1.2 Focus of the study**

About the adolescents, we aim to study if there are statistically significant differences between the distributions for parent-adolescent bonding reported by the adolescent and symptoms reported by the adolescent. Secondly, if there are any statistically significant differences between the distributions for parent-adolescent bonding reported by the adolescent and the quality of family interactive dynamics.

About parents, we aim to study any statistically significant differences between the distributions for parent-grandparent bonding reported by parent and the quality of family interactive dynamics. Secondly, we study if there are any statistically significant differences between the distributions for parent-grandparent bonding reported by parent and adolescent psychopathology.

## **2.2 Procedures**

### **2.2.1 Youth Self Report (YSR) and Child Behavior Check List (CBCL) [16]**

This questionnaires are among the most commonly used scales for rating juvenile behavior and they are used internationally in the clinical setting and in research. Here we have employed the Italian validation form [17,18]. They are in the form of a questionnaire completed by parents (CBCL) and adolescents (YSR). The questionnaires yield two profiles: One for competences and one for behavioral and emotional problems, which can be assessed as "normal", "borderline" or "clinical" on 8 specific syndrome scales. The syndromic scales relating to the various psychopathological pictures are: anxiety/depression, withdrawal, somatization, social problems, thought-related problems, attention problems, aggressive and role-breaking behavior. The problems are grouped into: internalizing problems (anxiety, depression and withdrawal, somatization); externalizing problems (aggressive and role-breaking behavior); and other problems (social problems, thought-related problems, attention problems).

### **2.2.2 Parental Bonding Instrument (PBI) [19,20]**

Two scales termed 'care' and 'overprotection' or 'control', measure fundamental parental styles as perceived by the child. The measure is 'retrospective', meaning that adults (over 16

years) complete the measure for how they remember their parents during their first 16 years. The measure is to be completed for both mothers and fathers separately. There are 25 item questions, including 12 'care' items and 13 'overprotection' items. The PBI was construct on the basis of two variables deemed important in developing a bond between parent and child: caring (in the opposite extreme being indifference or rejection), and overprotection (in the opposite extreme being encouragement of autonomy and independence). In addition to generating care and protection scores for each scale, parents can be effectively "assigned" to one of four quadrants:

- affectionless control: Low care and high overprotection
- affectionate constraint: High care and high overprotection
- absent or weak bonding: Low care and low overprotection
- optimal bonding: High care and low overprotection

### **2.2.3 Lausanne Trilogue Play (LTP) [21]**

The "Lausanne Trilogue Play" (LTP) is a well known situation for the assessment of triadic interactions (mother-father-infant), which is widely used in research for the study of family development (reliability of the LTP application in Italian population has been demonstrated [22]), as well as in therapy for intervention purposes. For adolescents it's a semi-standardized video-recorded observation procedure and the activity theme are adolescent's birthday or weekend. The parents are given this tasks, wich cover each of the four possible configuration of a triadic relationship:

- 1) One parent talk with the adolescent in the presence of the other parent
- 2) The parents switch roles
- 3) Both parents talk with the adolescent
- 4) The parents interact with each others in the presence of the adolescents

Scoring system FAAS 6.3 [23,24] consist in 15 variables; range of scores: Inappropriate - moderate – appropriate. The variables are: postures and gazes, inclusion of the partners, implication of each partner's role, structure and time frame, co-construction, parental scaffolding, conflicts and disruptive interferences, support and cooperation between parents, adolescent self-regulation and involvement, interactive

mistakes and their resolution during activities and during transitions, affective warmth, validation of the child's emotional experience, authenticity of the affects expressed.

### 3. RESULTS AND DISCUSSION

#### 3.1 Descriptive Statistics of the Sample

In order to assess the degree of reliability of the tools used within our sample, Cronbach  $\alpha$  was calculated. For the LTP we have found  $\alpha$  (LTP\_total) = .970, in line with the findings from the international and national studies about the validation of this method [23,25]. For the CBCL we found  $\alpha$  = .832, in line with the value reported in validation studies on the original versions of the tools ranging from .75 to .84 [26].

Figs. 1a and 1b show the results of YSR and CBCL respectively, in the syndromic scale's score distribution (internalizing, externalizing, total problems). Adolescents and parents reveal a different range of clinical externalizing problems.

Figs. 2a and 2b show the results of PBI scores administered to parents and child respectively. We observe prevalence of weak or absent bonding for both mother with her parents and father with his parents (Fig. 2a). A prevalence of weak or absent bonding emerges between mother and child too (Fig. 2b).

#### 3.2 First Aim: Adolescent

##### 3.2.1 Hypothesis (1a)

Are there statistically significant differences (Kruskal Wallis test) between the distributions for parent-adolescent bonding (PBI) and (YSR) symptoms reported by the adolescent?

Looking to the results of the Kruskal Wallis test, significant statistical differences emerge about the level of externalizing problems referred by the adolescent in relationship to the quality of adolescent-parent relationship, with mother and father both:

- adolescent – mother “bonding” and total competences ( $\chi = 8.109$ ,  $df = 3$ ,  $p = .044$ ), externalizing problems ( $\chi = 11.178$ ,  $df = 3$ ,  $p = .011$ )
- adolescent – father “bonding” and externalizing problems ( $\chi = 8.667$ ,  $df = 3$ ,  $p = .034$ ).

Particularly, as shown in Fig. 3, the group characterized by “affectionless control” relationship has higher externalizing problems than other groups.

In order to discuss this result it's important to look to the qualitative distribution of frequencies in internalizing, externalizing and total problems (Figs. 1a and 1b). There is a deep difference referring to externalizing problems between parents and adolescents. This result is in line with literature that shows an incongruence between adolescent and parents perception about the child psychopathology. Furthermore, literature shows an association between this PBI attachment bond category and child psychopathology. But, why does this difference emerge only for externalizing problems? An association with adolescent development might be hypothesized: adolescents are managing with the second separation-individuation process which concerns the development of competences about negotiating rules and distance with family members.

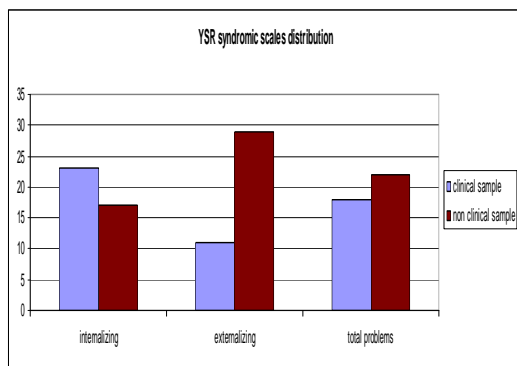


Fig. 1a. YSR syndromic scales distribution

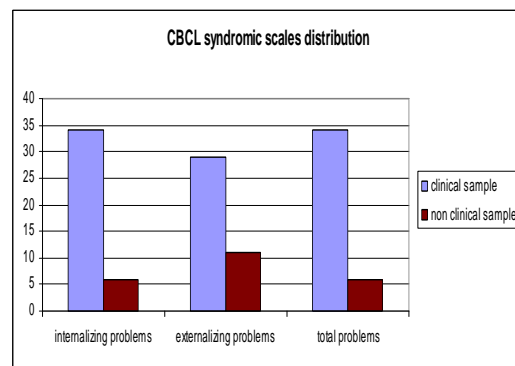


Fig. 1b. CBCL syndromic scales distribution

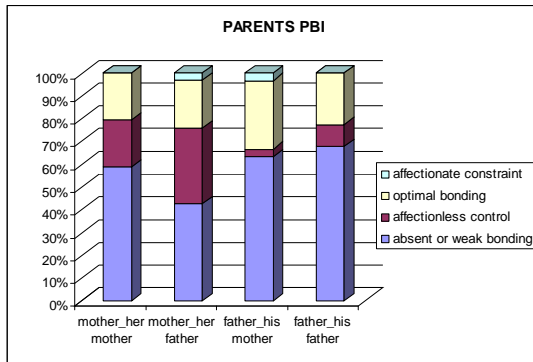


Fig. 2a. Parents PBI scores distribution

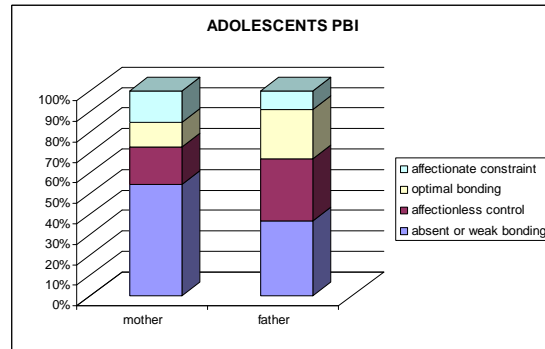


Fig. 2b. Adolescents PBI scores distribution

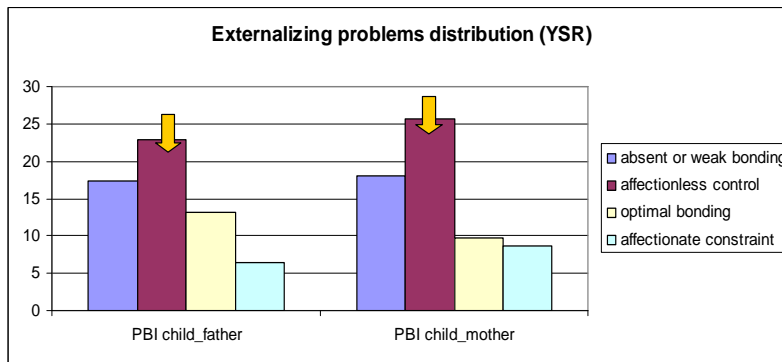


Fig. 3. PBI adolescent scores distribution in the externalizing problems group (YSR)

**3.2.2 Hypothesis (1b)**

Are there any statistically significant differences (Kruskal Wallis test) between the distributions for parent-adolescent bonding reported by the adolescent (PBI) and the quality of family interactive dynamics (LTP)?

From the Kruskal Wallis test it results that families where adolescents describe an “affectionate constraint” relationship with their mother (characterized by high care and high overprotection) show higher scores in the total score of the LTP second part if compared with “absent or weak bonding” ( $p = .047$ ), “affectionless control” ( $p = .047$ ) and “optimal bonding” ( $p = .014$ ) groups. Particularly, looking at each LTP scales (Fig. 4) statistically significant differences emerge between adolescent – mother affectionate constraint bonding and the other groups in co-construction, conflict and validation scales during the second part of the LTP. This LTP phase is a dyadic configuration part during which only two partners are in the active role, mother or father with the adolescent. This result alone seems not to give relevant

information, but it does when it is considered together with data coming from the parent-grandparent relationship and the quality of family interactive dynamics, as following discussed (hypothesis 2b).

There are no statistically significant differences in adolescent – father “bonding”.

**3.3 Second Aim: Parents**

**3.3.1 Hypothesis (2a)**

Are there any statistically significant differences between the distributions in parent-grandparent bonding reported by parent (PBI) and adolescent psychopathology (YSR and CBCL)?

The analysis found no statistically significant differences about parent-grandparent bonding and adolescent psychopathology. This result suggests there are no influences of the parental internal working model on their abilities to individuate and discriminate about adolescent psychopathology.

**3.3.2 Hypothesis (2b)**

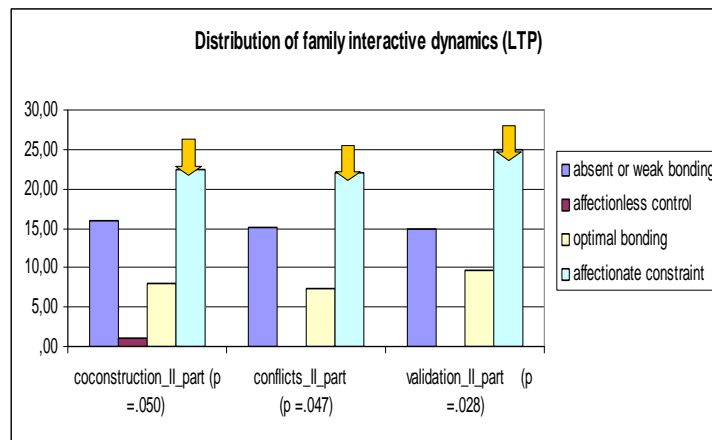
*Are there any statistically significant differences between the distributions for parent-grandparent bonding reported by parent (PBI) and the quality of family interactive dynamics (LTP)?*

Some significant results emerge when looking to the correlations between parent-grandparent relationship and LTP scales. First of all, from the mother’s point of view, there is a positive correlation between the level of overprotection referred by the mother in the relation with her father (adolescent grandfather) and the scores of some LTP scales: Postures (p =.038), inclusion (p =.046), roles (p =.034), co-construction (p =.033), competences (p =.032), activity errors (p =.038), affective warmth (p =.043). To be noted that these scales regard parental competences about managing the respect of the construction, limits, rules during a family interactions. On the

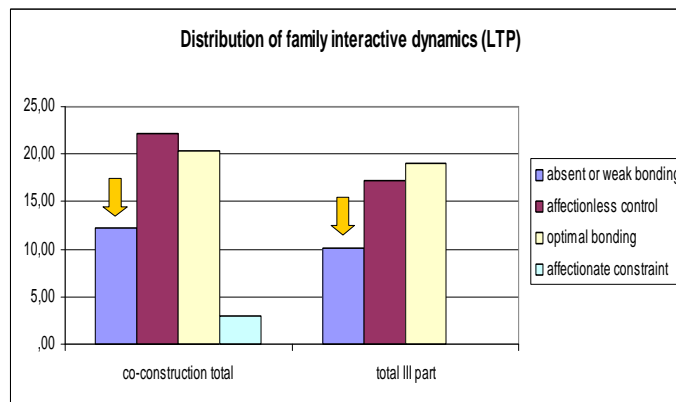
other side, we observe a negative correlation between the level of overprotection referred by the father in the relation with his mother (adolescent grandmother) and the scores of LTP scales referred to scaffolding (p =.046) and validation (p =.042).

The correlations results are in part confirmed by the non-parametric test. We observe (Fig. 5) that families where mother referred an “absent or weak bonding” with their father show a worse quality of co-construction (p =.021) and family interactive dynamics in the LTP third part (p =.046).

Summarizing our results, where there is an adolescent-mother relationship characterized by high care and high overprotection there are better competences in structuring activities (hypothesis 1b). Where there is a mother-father



**Fig. 4. Distribution of PBI adolescent scores for co-construction, conflicts and validation LTP second part scores**



**Fig. 5. Distribution of PBI scores for LTP co-construction total score and LTP total III part score**

relationship characterized by low overprotection and/or “absent or weak bonding” there are worse competences in structuring activities (hypothesis 2a and 2b). There might be an influence between the mother’s normative function and the quality of family interactive dynamics. Starting from this preliminary results we can presume the presence of a significant association between the internal working model of the mother and her ways to interact and manage the relation with her adolescent son [3,27]. These results are sustained by the ones coming from the parental point of view. It seems to be confirmed the association between the internal working model of the mother and the quality of family interactions concerning structuring activities. Starting from this data we have interpreted a possible association with the normative internal working model of the mother: It could be that where there is a good normative father, the mother is able to manage a good normative function. On the other side, when there is a too present mom, her son - the future father – could not to develop a good affective function and feel not so good in managing internal state of his son. Otherwise, when there is a good or a low presence of the mom, the future father feels able or not worse in managing affects.

#### 4. CONCLUSION

From this study it emerges a significant association between the internal working model of the mother and her ways to interact and manage the relation with her adolescent son; moreover, there is an association between adolescent’s psychopathology and his internal working model. These findings should be taken in account when psychotherapeutically working with adolescents and their families.

#### CONSENT AND ETHICAL APPROVAL

All authors declare that written informed consent was obtained from the patient (or other approved parties) for the participation to the research (form from our institution). Moreover the research had obtained Ethical approval by the Ethical Committee of the Ulss 16 Institution.

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#### COMPETING INTERESTS

Authors have declared that no competing interests exist.

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