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BEHAVIORAL PROBLEMS, PARENTAL MONITORING AND ATTACHMENT DURING ADOLESCENCE: A MULTI-INFORMANT STUDY

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A Vane,

la mora del mio cuore!
Sei nell'anima
e lì ti lascio per sempre…

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A special thanks to Prof. Lavinia Barone, for her support and encouragement during these three years. Her scientific supervision and her expertise were fundamental to my professional growth.

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Table of contents

List of Figures

List of Tables

CHAPTER 1

General Introduction

"All grown-ups were once children... but only few of them remember it."

Antoine de Saint-Exupéry

"The Little Prince"

Adolescence is a developmental period that is marked by profound transformations in parent-adolescent relationships. Across adolescence these relationships change from more hierarchical relationships in early adolescence to more egalitarian relationships by late adolescence (Laursen & Collins, 2009; Smetana, 2011). The quality of parent-adolescent relationships has been argued to be related to key aspects of psychosocial adjustment during this period (Bowlby, 1980; Grotevant & Cooper, 1986; Shomaker & Furman, 2009). For example, Pallini and colleagues (2018) founded a modest, positive relation between quality of children's attachment and their top-down self-regulation (effortful control). This finding is consistent with the conclusion that efforts to improve the quality of the parent-child attachment might foster children's effortful self-regulation, although it is also possible that children's top-down regulation affects the quality of their attachment or both aspects of functioning are affected by a third variable, such as genetics or maternal sensitivity. Since adolescents are faced with many challenges in relationships with parents, adolescence is especially thought to be a sensitive period for the development of psychosocial problems.

In the transition to adolescence, children require more autonomy and start to actively choose

the information they want to disclose to their parents and begin to re-evaluate the hierarchy of family roles; at the same time, parents adopt different strategies to communicate with their children, such as controlling or soliciting information (Crouter & Head, 2002; Kerr, Stattin, & Burk, 2010; Laird, Marrero, & Sentse, 2010). A number of constructs have been considered in order to investigate family communicative processes. Among them, adolescent disclosure and parental solicitation have been found to be strongly associated with parental knowledge (Laird et al., 2010). Racz and McMahon (2011), in their review on parental monitoring and knowledge, suggested that future research should consider past interactions as possible antecedents of parent–child relationship quality in adolescence. Indeed, past interactions shape current cognitive representations of relational bonds that affect present parent–child interactions (Kuczynski & Parkin, 2007; Lollis, 2003).

Furthermore, previous studies suggest that we must take into account the role of both gender and attachment as factors that plays a role in the relationship between parents and children in relation to behavioral problems.

In fact, it has been argued that children in insecure attachment relationships are more prone to emotional and behavioral problems (e.g., Cassidy & Kobak, 1988; Renken, Egeland, Marvinney, Mangelsdorf, & Sroufe, 1989; Waters at al., 2000; Fearon et al., 2010; Madigan et al., 2013).

Disagreements between adolescents and parents have been found to vary by adolescent's gender, although the nature of differences often depends on the topic of contention (Bell et al., 2001). Recent studies indicate that the adolescent's gender may also have an important influence on the relationship between adolescent–parent discrepancies in perceptions of family functioning and adolescent adjustment (Ohannessian et al., 2000; Human et al., 2016).

There is a clear paucity of studies that examine both parental monitoring, attachment and

gender differences in this association over the course of behavioral problems in early adolescence and there is still much to be learned about those themes. Therefore, this thesis was designed to explore several aspects of behavioral problems and to offer a significant contribution to the preadolescence literature.

1.1. Thesis Summary

The main goal of the current study is to expand on previous research investigating socio emotional features in early adolescence. This has been done through e multi informant approach involving respectively preadolescents, their parents and their teachers. Variables under consideration are: insecure attachment, parental monitoring, behavioral problems and risk behaviors. Although preliminary evidence supports both moderated and mediated relationships between these four variables, further investigation is required to determine the nature of these relationships.

The first part (Chapter 2) provided a profile of preadolescents, their parents and teachers and some preliminary descriptive results.

The research has been implemented by two studies:

STUDY 1 (Chapter 3) will focus on the preadolescents perception of their wellbeing. The study main aim is to explore the relationship among attachment, parental monitoring and behavioral problems in a preadolescent normative sample. In particular, the main goal is to investigate how monitoring and insecure attachment are related and how each of these variables and their interaction may lead to emotional and behavioral problems. Moderation models will be used to evaluate and understand the responses of preadolescents, paying attention also to socio-demographic variables.

STUDY 2 (Chapter 4) aims to investigate relationships among all variables in a multi-informant perspective, taking into account the responses of the preadolescent, both parents and teacher (class coordinator). The study main aim is to explore agreement and disagreement among preadolescents' and parents' ratings in relation to behavioral problems, attachment and parental monitoring. A part will be dedicated also to teachers' ratings of behavioral problems.

Specifically, the present study evaluated interrater agreement among the different dyads (mother-adolescent, father-adolescent, mother-father and teacher with each parent) with several metrics of agreement (i.e. correlations, difference score and Fisher's z-Test). After this, a study's second aim was to examine potential moderators (adolescents' gender and insecure attachment) of the degree of parent–child congruence in perceived behavioral problems.

The results of this study provide evidence to support the growing body of literature on emotional and behavioral problems during adolescence and contributes to furthering the investigation of behavioral problems in community-based samples of adolescents by considering two aspects that had innovatively being explored in their reciprocal interactions, such as parental monitoring and attachment.

CHAPTER 2: Descriptive results

2.1 Research Objectives

The main goal of the current study is to expand on previous research investigating socio emotional features in early adolescence. This will be done through e multi informant approach involving respectively preadolescents, their parents and their teachers. Variables under consideration are: insecure attachment, parental monitoring, behavioral problems and risk behaviors. Although preliminary evidence supports both moderated and mediated relationships between these four variables, further investigation is required to determine the nature of these relationships.

The research has been implemented by two studies:

STUDY 1 (Chapter 3) aims to investigate the relationship between parenting and attachment in the prediction of internalizing and externalizing problems in a preadolescent normative sample. Moderation models will be used to evaluate and understand the responses of preadolescents, paying attention also to socio-demographic variables.

STUDY 2 (Chapter 4) aims to investigate relationships among all variables in amulti-informant perspective, taking into account the responses of the preadolescent, both parents and teacher (class coordinator).

Below essential information of the method used that will be provided in all studies.

2.2 Method

2.2.1 Sample

The sample consisted of adolescents, their parents and teachers. Adolescents were recruited

from the secondary schools in the city and province of Pavia (Italy). In total, 912 families received a written informed consent; 67% (N=614) of the consent were returned to the researchers. Of the returned consents, 405 accepted to participate. In total, 352 questionnaire packages were given to the families (53 families refused to participate to the study even though they declared their participation). 328 packages returned to the researchers.

Given that the sample consisted of 4 groups - adolescents, mothers, fathers and teachers-, it is worth to note that the number of completed measures was different across these 4 groups. See Appendix A (Flowchart) details number for family (dis)engagement and participation in the study.

Table 1: Descriptive statistics of adolescents, families and parents

Demographic characteristics			**%**	**N**	**Mean (SD)**
Preadolescents					13.20
	Age (year)				(0.54)
	Gender	male	47.7	155	
		female	52.3	170	
	Nationality	Italians	94.7	313	
		Other	5.3	12	
Family					
	Number of sisters/brothers	0	0.4	1	
		1	67.6	180	
		2	12.4	33	
		3 or more	19.5	52	
Parents					
Mothers					
	Age (year)				47.03 (5.2)
	Marital status	Married (cohabit)	81.9 (8.1)	181 (18)	
		Divorced	10	22	
	Education	Secondary school	14.5	33	

	High school	50.5	115
	Degree	22.8	52
	Post-graduate Degree	12.3	28
Occupation			
	Farm laborers, menial service workers, students, housewives	11.7 8.3	24 17
	Unskilled workers		
	Machine operators and semi-skilled workers	13.6	28
	Skilled manual laborers, craftsmen, tenant farmers	6.3	13
	Clerical and sales workers	1.5	3
	Technicians, semi-professionals	21.4	44
	Smaller business owners, farm owners, managers	11.2	23
	Administrators, lesser professionals, proprietor of medium-sized business	12.6	26
	Higher executive, proprietor of large businesses	13.6	28

Fathers

	Age (year)				50.08 (6.5)
	Marital status	Married	86.6	181	
		(cohabit)	(6.7)	(14)	
		Divorced	6.7	14	
	Education	Secondary school	25	54	
		High school	40.7	88	
		Degree	23.6	51	
		Post-graduate Degree	10.2	22	
	Occupation	Farm laborers, menial service workers, stude	1.9	4	
		housewives	8.1	17	
		Unskilled workers	19.6	41	
		Machine operators and semi-skilled workers	9.6	20	
		Skilled manual laborers craftsmen, tenant farm	2.4	5	
		Clerical and sales wor	17.2	36	
		Technicians, semi-professionals	19.1	40	
		Smaller business owner farm owners, manager	8.1	17	
		Administrators, lesser professionals, propriet medium-sized busines	13.9	29	
		Higher executive, propr of large businesses			
SES					
SES Scales					37.56 (15.05)
	Upper		38.0	69	
	Middle		19.7	66	
	Lower		42.3	99	

The mean age of adolescents' was 13.2 (*SD*= 0.5; range = 12-16 years), 44% were male (M_{age} = 13.26, *SD*= 0.6; range = 12-16 years) and 56% female (M_{age} = 13.13, *SD*= 0.4; range = 12-15 years).

Mean age of the mothers was 47 years (SD = 5.0; range = 31–63); mean age of the fathers was 50.1 years (SD = 6.6; range = 32–73).

The t test did not show any significant differences between adolescents females and males on SES (t (229) = 2,41, p = .89).

2.2.2 Measures

Socio-demographic variables: a set of questions regarding health, school, communication with friends, time spent at the play station or TV, risk behaviors and family. For example, "How many hours do you spend every day in your free time watching television, videos, phone or tablet?",

"Do you like going to school?", "How is your family's economic situation?".

These questions were inserted with the aim of better understanding some peculiarities of families and preadolescents.

United States scale: Hollingshead Four Factor Scale. Hollingshead's four-factor SES (Hollingshead, 1975) score is derived from both education and occupation information. Occupation codes were based on the 1970 U.S. census. Occupation and education were highly correlated for both mothers (r = .75) and fathers (r = .83).

In the Hollingshead (1975) system, an SES score is computed in the following manner. An education score (1 through 7, with 1 equal to less than a seventh-grade education and 7 equal to graduate training) and an occupation score (1 through 9, with 1 equal to farm laborers/menial service workers and 9 equal to higher executives, proprietors of large businesses, and major

professionals) is assigned for each parent/guardian based on information provided by them. Education and occupation scores are then weighted to obtain a single score for each parent/ guardian (range 8 to 66) that reflects one of five social strata (1 through 5, with 1 a reference to unskilled laborers/ menial service workers and 5 a reference to executive/ proprietors/major professionals). For families with multiple caretakers, scores for each are averaged to obtain a single SES score.

Attachment. Attachment orientation was assessed using the Adolescent-Parent Attachment Inventory (APAI, Moretti, McKay, & Holland, 2000), a recently-developed measure of adolescent-parent attachment adapted from Brennan, Clark and Shaver's (1996) measure of adult romantic attachment. (A shorter version of this measure, the Experiences in Close Relationships questionnaire (ECR, Brennan, Clark, & Shaver, 1998) was published subsequently.

The APAI consists of two major scales (9 items each, scored on a 7-point Likert-type scale) designed to provide continuous ratings on dimensions of Anxiety and Avoidance. These scores also allow categorization of Preoccupied, Fearful, Dismissing, and Secure orientations according to Bartholomew and Horowitz's (1991) model. Preliminary investigations support the reliability, and structural and convergent validity of the APAI (McKay & Steiger, 2003; Steiger & Moretti, 2003; 2005). An example of an item that assesses attachment anxiety is *"I worry that my parent won't care about me as much as I care about my parent."*. Instead, *"I don't mind asking my parent for comfort, advice, or help"* is an item that describes attachment avoidance.

Medium values for Cronbach's alpha were obtained from adolescents' reports for both scales (α = .71 for Avoidance; α = .72 for Anxiety). Alpha reliabilities were .75 for Anxiety and .70 for Avoidance for mothers' reports and .75 for Anxiety and .60 for Avoidance for fathers' reports.

In addition, before using the APAI it was made a back translation authorized by the authors.

Parental monitoring. The Parental Behavioral Control Scale (Kerr & Stattin, 2000) is a 5-

item scale that assesses parents' degree of monitoring. A 5-point response scale was used for all items. The overall ratings were as follows: (1) 'Almost never', (2) 'Rarely', (3) 'Sometimes', (4) 'Often', (5) 'Very often'. The scale has been validated in an Italian context (Miranda et al., 2011; Kiesner et al., 2009). It assesses the extent to which children need to have permission to go out with friends, to finish their homework before going out, and to have permission to spend their money.

We analyzed disclosure, solicitation and control as potential sources of parents' knowledge about their children (Kerr & Stattin, 2000). We assessed these variables with four subscales that are widely used in Italy (Miranda et al., 2011; Kiesner et al., 2009).

Adolescent disclosure measure adolescents' voluntary and spontaneous revelations to their parents about friends, activities, and whereabouts, for instance ''Do you spontaneously tell your parents about your friends (which friends you hang out with and how they think and feel about various things)?''

Parental solicitation assesses how often the parents ask the adolescent or (parents of) friends about unsupervised time, for instance ''During the past month, how often have your parents initiated a conversation with you about your free time?''

The *parental control* scale measured the way in which parents control the adolescent's activities and friendships. An example of an item is ''Must you have your parents' permission before you go out during the weeknights?''

Alpha reliabilities were:

- for adolescents' reports .81 for adolescent disclosure, .68 for parental solicitation and .61 for parental control;
- for mothers' reports .76 for adolescent disclosure, .65 for parental solicitation and .69 for parental control;
- for fathers' reports .75 for adolescent disclosure, .68 for parental solicitation and .68 for parental control.

Behavioral and emotional problems. CBCL/6-18 (*Child Behavior Checklist*, completed by parents), YSR/11-18 (*Youth Self-Report,* completed by adolescents) and TRF/6-18 (*Teacher's Report Form,* completed by teachers) are standardized screening questionnaires internationally used to identify emotional/behavioral problems and social competencies in children and adolescents (Achenbach, 1991 a, b, c). The scale has been validated in the Italian context (Frigerio et al. 2004; Miranda et al., 2011). The time frame for CBCL/6- 18 and YSR/11-18 responses is usually the past six months, but the period of time may vary according to different study objectives. Because teachers may need to make periodic reassessments during the school-year, the time frame for administering the TRF/6-18 is usually the last two months.

The three questionnaires have a similar structure comprising two sections: one for social competence/adaptive functioning and another for behavior problems (behavior profile). We have chosen to use only this last part, due to its relevance during preadolescence. The behavior profile section of the three instruments comprises 118 items that can be scored as zero (not true), one (somewhat or sometimes true) or two (very true or often true). These items provide scores for eight narrowband scales or syndromes (Anxious/Depressed, Withdrawn/Depressed, Somatic Complaints, Social Problems, Thought Problems, Attention Problems, Rule-Breaking Behavior, and Aggressive Behavior), and three broad-band scales (Internalizing Behavior Problems, Externalizing Behavior Problems, and Total Behavior Problems). Items from the syndromes or subscales Anxious/ Depressed, Withdrawn/Depressed and Somatic Complaints are components of the Internalizing scale (for instance, "*There is very little that I enjoy")*, while items from syndromes or subscales Rule-Breaking Behavior and Aggressive Behavior are components of the Externalizing scale (for instance "*I break rules at home, school, or elsewhere")*.

In this study, we do not use all the questionnaire but only Internalizing and Externalizing scales. For all three scales, raw scores are transformed into T-scores that indicate whether subjects present deviant behaviors or deficient competencies in relation to norms for their age

and gender.

Alpha reliabilities:

- for adolescents' reports were .88 for externalizing scale and .87 for internalizing scale;
- for mothers' reports were .77 for externalizing scale and .86 for internalizing scale;
- for fathers' reports were .83 for externalizing scale and .85 for internalizing scale;
- for teachers' reports were .84 for externalizing scale and .76 for internalizing scale.

Substance Use. To measure youth substance use, we used a self-report scale - Youth Self-Report of Substance Use (Kiesner, 2010) - asking how often in the past month the youth had smoked cigarettes, drunk beer, drunk wine, drunk wine coolers, drunk hard alcohol, and smoked marijuana.

Thus, a total of 6 items contributed to this scale (one item for each substance). Responses were given on a 5-point scale ranging from "Never" to "Every day" in the past month.

2.2.3 Procedure

12 secondary schools took part to the project by signing the Project Agreement by the Head Teacher of the school (for a detailed description, see flowchart Appendix A). The Ethics Committee of the Department of Brain and Behavioral Sciences of the University of Pavia and IUSS approved the project. The project was presented to the adolescents of every eighth grade and, at the same time, a presentation letter of the project was submitted to the adolescents with the informed consent. Those who did not give their consent to the second school meeting were given extra time.

Families were free to choose one of three possibilities which were provided in the informed consent: 1) The participation of the adolescent and both parents; 2) only the adolescent's participation; 3) being contacted in the future. Both parents, children and teachers were assured

of the anonymity of their questionnaire responses. Confidentiality was assured by two factors: 1) an identification number; 2) questionnaires were delivered and returned in closed envelops. To guarantee confidentiality, reference was made to the Code of Ethics for research in psychology defined by the Italian Association of Psychology.

Administration of measures was overseen by researchers following standardized administration procedures, with psychology assistants facilitating the distribution of questionnaires. Time and sequence of questionnaire completion were not constrained, and thus varied across participants. In almost all cases, however, participants completed measures within 20 minutes. All measures were completed by participants independently, with verbal instruction and support given by research assistants on an individual basis if required. Teachers and parents completed questionnaires at home and they had almost a week of time to retrieve the measures (parents did this through their child).

Adolescents were asked to complete four questionnaires, namely Adolescent-Parent Attachment Inventory (APAI; Moretti et al., 2000), Parental Behavioral Control Scale (Kerr & Statin, 2000), Youth Self Report (YSR; Achenbach, 1991c, 1995) and Youth Self-report of Substance Use (Kiesner et al. 2009). Moreover, adolescents were provided a series of questions to inquire on their physical activities, health conditions, their school perception, any grade repetition, pocket money, any gambling experience. Parents were asked to complete three questionnaires, namely Adolescent-Parent Attachment Inventory (APAI; Moretti et al., 2000), Parental Behavioral Control Scale (Kerr & Statin, 2000), Child Behavior Checklist (CBCL; Achenbach, 1991a, 1995). Finally, teachers completed Teacher Report Form (TRF; Achenbach, 1991b; Achenbach & Rescorla, 2001) to evaluate behavioral problems.

A short report of main results obtained was delivered to all directors of the schools at the end of the school year.

2.2.4 Analytic Plan

There are three essential components to the analytic strategy for the current preliminary study:

1) data preparation and imputation;
2) pooling of data, with checks for between-gender heterogeneity of means;
3) employment of multiple correlations to test for basic predictive relationships;

Descriptive statistics and overall correlations among all variables of interest were calculated using SPSS 14.0.2.

2.3 Preliminary Descriptive Results

2.3.1 Set of questions about actions and perception of preadolescents

More than half of adolescents (60%) reported that they usually engage an hour in physical activities 2-4 times per week; only 5% of them didn't attended any physical activity. The health conditions were considered as excellent and good (42-53%). Regarding adolescents' perception about the school, 30% reported that they do not like going to school.

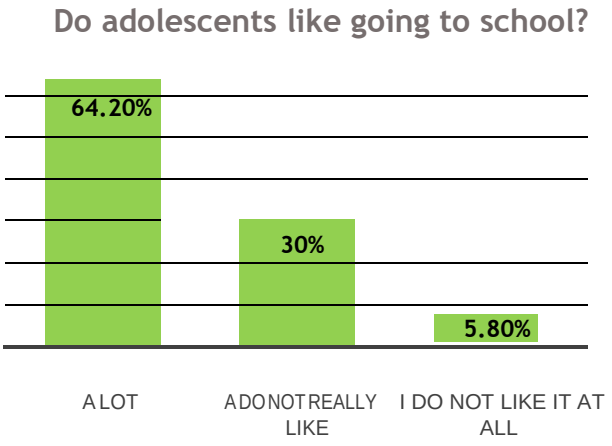


Figure 1. Adolescents' perception about the school.

On the other hand, there is no a high rate of grade repetition, only 6% repeated a grade. This indicates that only a few students fail the school year.

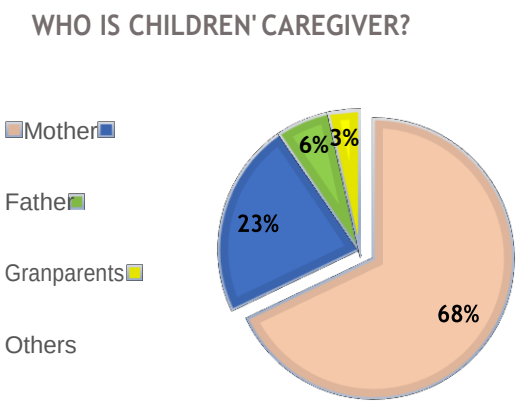
Regarding adolescents' pocket money, 35% of them received a pocket money, whereas 65% did not.

Gambling is one of the factors investigated in this research with the aim of analyzing behavior and game choices. Participants were asked if they had ever gambled. 20% had an experience of gambling at least once. Of the adolescents, most respondents (80%) reported that they had experience of online games.

Most adolescents claim to have at least one brother (30%) or one sister (25%) and be either the first-born (35.4%) or the second-born (33.8%). As for the perception of the family's economic situation, about 59% of boys submits that this does not affect the family atmosphere.

2.3.2 Attachment

Adolescent-parent attachment was measured using the Adolescent Parent Attachment Inventory (APAI; Moretti, 2000). Both mothers and fathers completed the parental version and adolescents completed the youth version.



Most participants identified a female caregiver as their primary attachment figure (approximately 68% indicated Biological Mother); whereas, only 23% identified a male caregiver (Biological Father). The remainder of participants indicate grandparents (6%) and other figures (3%, brother, aunt, father's wife) as caregivers.

Figure 2. Primary attachment figure identified by adolescents

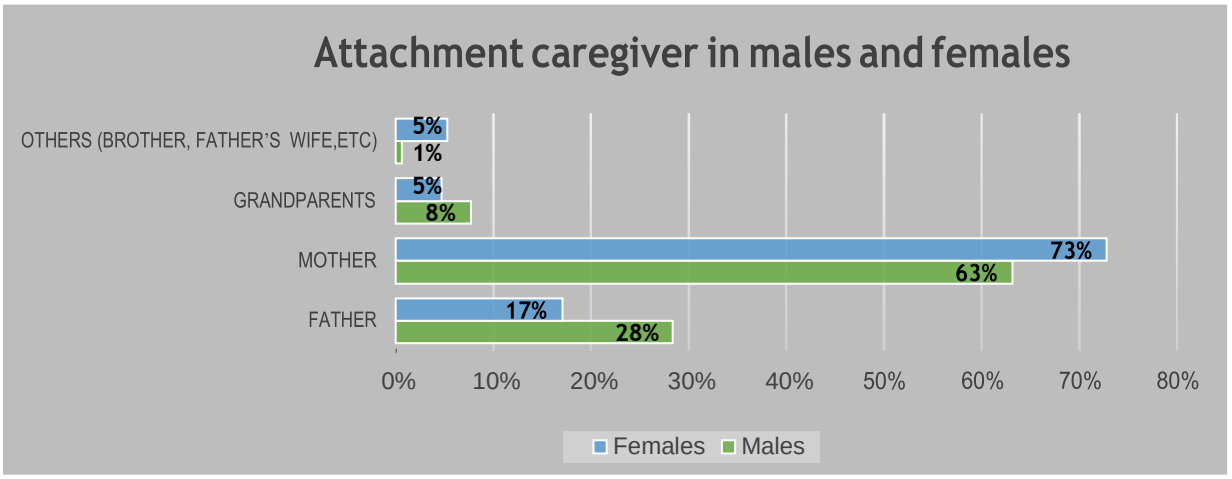


Figure 3. Primary attachment figure identified by adolescents separated by gender.

Independent-samples t-tests were conducted to compare female adolescents' and male adolescents' perceptions about their attachment. No significant result was observed in neither attachment anxiety scores (t (323) = .23, *p*= .81) nor attachment avoidance scores (t (323) = .26, *p*= .78).

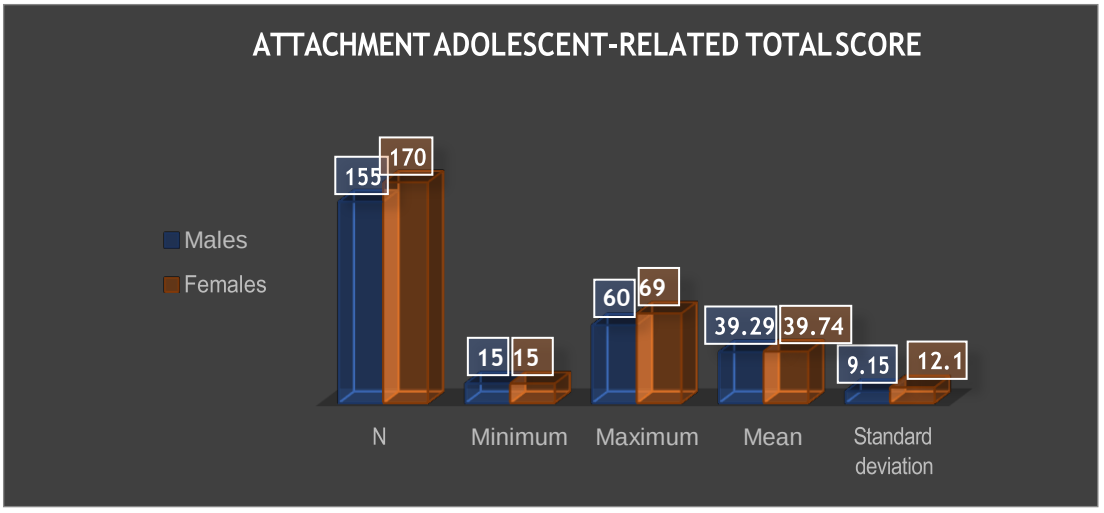


Figure 4. Attachment adolescent-related total score.

Paired-samples t-tests were conducted to compare mothers' and fathers' perceptions about the attachment. There was a significant difference both in mothers' (M= 2.32, *SD*= 1.06) and fathers' (M= 4.24, *SD*=.87) scores for attachment avoidance t(212)= -17.11, *p* = < .001 and

in mothers' (M= 3.00, *SD*= .96) and fathers' (M= 2.71, *SD*=1.12) scores for attachment anxiety t(212)= 4.14, *p* = < .001.

In particular, fathers perceive more avoidant attachment while mothers more anxious attachment in their bond with their offspring. As can be seen from the means, the difference is more evident in the perception of avoidant attachment.

2.3.3 Parental monitoring

Parental monitoring has been measured by using the Parental Behavioral Control Scale (Kerr & Statin, 2000). Both mothers and fathers completed the parental version and adolescents completed the youth version.

Independent-samples t-tests were conducted to compare female adolescents' and male adolescents' perceptions about their parents' monitoring. No significant difference was observed in the total scores of monitoring (t(323)= 1.78, *p*= .08).

Paired-samples t-tests were conducted to compare mothers' and fathers' perceptions about their monitoring of their adolescent's behavior. There was a significant difference in the total scores for the monitoring of mothers (M= 64.53, *SD*= 8.07) and fathers (M= 57.78, *SD*=11.63); t(211)= 7.92, *p* = < .001.

In particular, mothers claim to monitor their children more than their fathers. This difference, however, is not perceived by adolescents, who claim they do not see any difference compared to the monitoring carried out by their parents.

2.3.4 Emotional and Behavioral Problems

Emotional and behavioral problems have been measured using Child Behavior Checklist (CBCL; Achenbach, 1991). Both mothers and fathers completed the parental version and adolescents completed the youth version.

Independent-samples t-tests were conducted to compare female adolescents' and male adolescents' perceptions about their behavioral and emotional problems. There was a significant difference only in the scores for the internalizing problems of female (M= 20.0, *SD*= 10.0) and male (M= 14.4, *SD*=6.8); t(322)= -5.78, *p* = < .001.

Paired-samples t-tests were conducted to compare mothers' and fathers' perceptions about their adolescent's behavioral and emotional problems. There was a significant difference in the scores for the mothers' perception about the internalizing problems (M= 10.4, *SD*= 7.6) and fathers' perception (M= 8.5, *SD*=7.4); t(212)= 4.52, *p* = < .001.

In addition, t-scores for internalizing and externalizing problems scales were calculated in order to categorize the adolescents who are in the normal range and clinical range. According to mothers' reports, 60% of adolescents were in the normal range, 25% of them were in the clinical range for internalizing problems. According to fathers' reports, 75% adolescents were in the normal range, and 13% of them were in the clinical range for the externalizing problems. According to adolescents' reports, 45% of them were in the normal range, 31% of them were in the clinical range for internalizing problems.

The t test did not show any significant differences between females and males on t-scores (t (320) = -,56, p = .57).

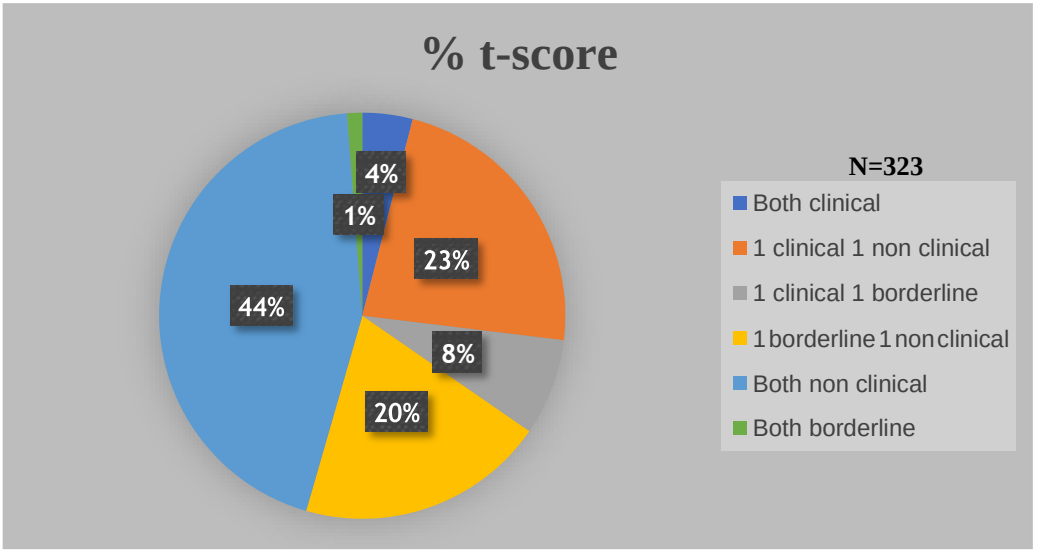


Figure 5. t-score percentages reported by adolescents

2.3.5 Substance Use

Risk behaviors have been measured by using Youth Substance Use Questionnaire (Kiesner, 2010); only adolescents completed the questionnaire.

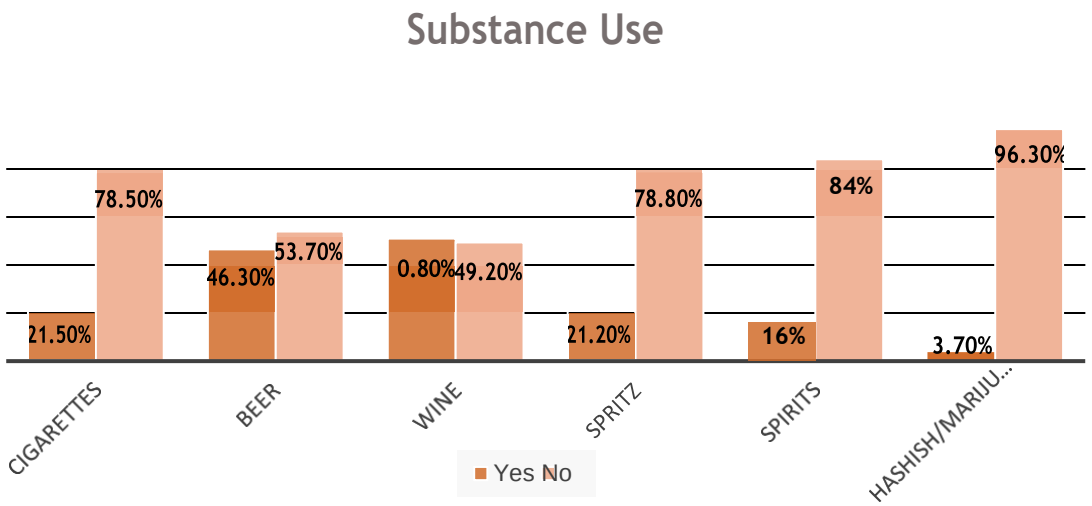


Figure 6. Substance use reported by adolescents

It turned out that most boys / girls did not act at risk behaviors like smoking cigarettes (78.5%), drinking alcohol such as beer (53.7%), spritz (78.8%), spirits (84%) or make use of non-legal substances such as hashish and marijuana (96.3%). Only with regard to the assumption of an alcoholic beverage such as wine, the percentage of adolescents who did not use it is lower (49.20%) compared to that of adolescents that has consumed at least once in life.

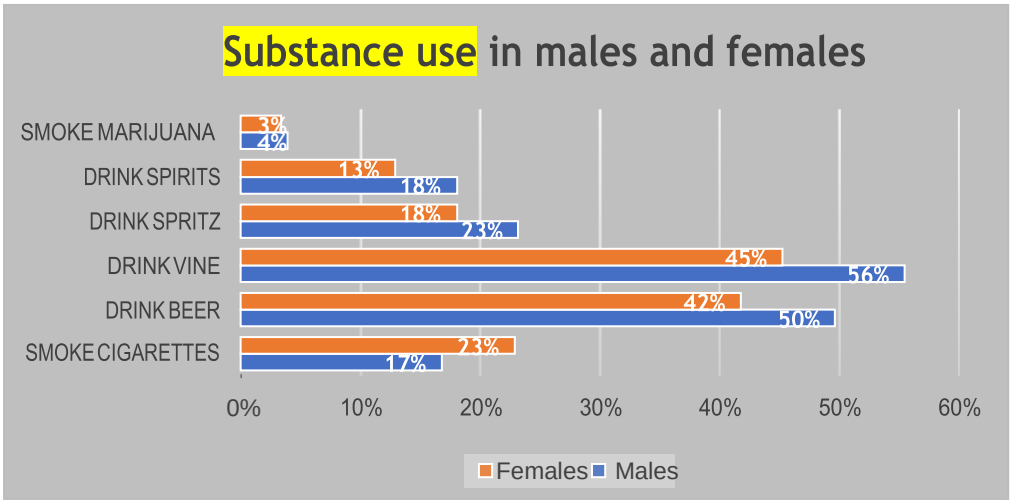


Figure 7. Substance use behaviors reported by adolescents, separated by gender

2.3.5 Correlations, means and standard deviations

The table below summarizes means and standard deviations for the variables both across and within gender.

Table 2. Variable means across and within gender

	Total N=325		Males N=155		Females N=170	
Variable	Mean	s.d.	Mean	s.d.	Mean	s.d.
Internalizing symptoms	17.45	9.16	14.44	6.89	20.03	10.05
Externalizing symptoms	11.00	7.06	10.83	6.73	10.97	7.16
Attachment Avoidance	2.14	.67	2.13	.62	2.15	.72
Attachment Anxiety	3.08	1.11	3.07	.94	3.10	1.29
Parental Solicitation	3.02	.57	3.02	.55	3.03	.58
Parental Control	3.94	.44	3.95	.44	3.93	.44
Adolescent disclosure	2.76	.38	3.51	.98	3.52	.96

Consistent with previous research, females scored higher than males on measured of internalizing symptoms and scored less on attachment avoidance. However, with Bonferroni correction for multiple contrasts, these mean differences were not significant.

As a precursor to regression analysis, bivariate intercorrelations between youth-reported attachment, monitoring and internalizing and externalizing problems were examined.

Results were generally consistent with prior research findings, demonstrating that only the anxiety insecurity scale (APAI) and all monitoring scales (adolescent disclosure, parental solicitation and parental control), were associated with internalizing and externalizing problems.

Table 3. Intercorrelations of major dependent and independent variables about adolescents

N=325	1	2	3	4	5	6	7
Internalizing symptoms	—						
Externalizing symptoms	.377**	—					
Attachment Avoidance	-.020	.043	—				
Attachment Anxiety	.287**	.166**	.140*	—			

Parental Solicitation	-.190**	-.110*	-.073	–.053	—		
Parental Control	-.171**	–.369**	.077	.089	.319**	—	
Adolescent Disclosure	–.174**	–.557**	–.198**	–.114*	.310**	-.108	—

Note. *p<.05; **p<.01

More specifically, attachment anxiety was positively associated with internalizing and externalizing symptoms. In addition, youth-reported parental control, adolescent disclosure and solicitation were negatively associated with both internalizing and externalizing symptoms. Finally, externalizing symptoms were positively associated with internalizing symptoms.

Results were generally consistent with prior research findings (Laird et al., 2008; Tolan et al., 2013), in particular regarding the role of adolescent disclosure that is considered a protective factor concerning behavioral problems. The observed correlation between the variables was strong and significant. In fact, adolescent disclosure is positively associated with youth-reported parental solicitation and negatively with both internalizing and externalizing symptoms and attachment avoidance and anxiety.

Table 4. Variable means across and within parents

	Total N=440		Mathers N=227		Fathers N=213	
Variable	Mean	s.d.	Mean	s.d.	Mean	s.d.
Internalizing symptoms	9.54	8.18	10.58	7.86	8.50	7.61
Externalizing symptoms	3.96	4.32	4.22	4.26	3.71	4.39
Attachment Avoidance	3.36	.9	2.34	1.05	4.22	.89
Attachment Anxiety	2.74	1.16	3.02	.99	2.75	1.15
Parental Solicitation	3.37	.78	3.59	.69	3.16	.88
Parental Control	4.44	.55	4.50	.51	4.39	.60
Adolescent disclosure	3.09	.75	4.02	.70	3.78	.80

Mothers scored higher than fathers on measured of internalizing and externalizing symptoms and on all variables. However, with Bonferroni correction for multiple contrasts, these mean differences were not significant.

As a precursor to regression analysis, bivariate intercorrelations between mother-reported attachment, monitoring and internalizing and externalizing problems were examined.

Table 5. Intercorrelations of major dependent and independent variables about mothers

N=325	1	2	3	4	5	6	7
Internalizing symptoms	—						
Externalizing symptoms	.438**	—					
Attachment Avoidance	.206**	.345**	—				
Attachment Anxiety	.303**	.118	.017	—			
Parental Solicitation	-.242**	-.170*	-.147*	–.112	—		
Parental Control	-.138*	–.376**	-.095	–.069	.277**	—	
Adolescent Disclosure	-.142*	–.351**	– .588**	–.074	.237**	.453**	—

*p<.05; **p<.01

More specifically, attachment anxiety was positively associated with internalizing symptoms but not with externalizing scale and with attachment avoidance, while attachment avoidance was positively associated with internalizing and externalizing symptoms. In addition, mother-reported parental control, solicitation and adolescent disclosure were negatively associated with both internalizing and externalizing symptoms and with attachment avoidance, while they were not associated with attachment anxiety. Finally, externalizing symptoms were positively associated with internalizing symptoms.

Mother-related adolescent disclosure was negatively associated with externalizing and internalizing symptoms, with mother-related parental control, solicitation and attachment avoidance. No association was found with attachment anxiety.

As a precursor to regression analysis, bivariate intercorrelations between father-reported attachment, monitoring and internalizing and externalizing problems were examined.

Table 6. Intercorrelations of major dependent and independent variables about fathers

N=325	1	2	3	4	5	6	7
Internalizing symptoms	—						
Externalizing symptoms	.571**	—					
Attachment Avoidance	–.097	–.189**	—				
Attachment Anxiety	.305**	.180**	.043	—			
Parental Solicitation	-.107	.066	.385**	–.216**	—		
Parental Control	-.213*	–.305**	.314**	–.148*	.288**	—	
Adolescent Disclosure	-.252**	–.416**	.405**	–.164*	.338**	.399**	—

*p<.05; **p<.01

More specifically, attachment anxiety was positively associated with both internalizing and externalizing symptoms, while attachment avoidance was positively associated only with externalizing symptoms. In addition, father-reported parental control was negatively associated with both internalizing and externalizing symptoms and attachment anxiety and positively associated with attachment avoidance and father-related parental solicitation. Contra vise, father-related parental solicitation was positively associated with attachment avoidance and negatively associated with attachment anxiety. Finally, externalizing symptoms were positively associated with internalizing symptoms.

Father-related adolescent disclosure was negatively associated with internalizing symptoms and positively associated with father-related parental control and solicitation and attachment avoidance.

This chapter provided a profile of preadolescents and their parents and some preliminary descriptive results.

For reasons related to the main and secondary objectives of the present work, it was decided to use the socio-demographic variables and the Youth Substance Use Questionnaire only with a view to having a more complete view of this evolutionary period. In fact, these questions were inserted with the aim of better understanding some peculiarities of families and preadolescents. Furthermore, this part could be a starting point for further details on the topic.

Concerning attachment, most participants identified biological mother as their primary attachment figure (approximately 68%). Fathers perceive more avoidant attachment while mothers anxious, but the difference is more evident in the perception of avoidant attachment.
A significant result regarding monitoring concerns the difference between mothers and fathers. In particular, mothers claim to monitor their children more than their fathers. This difference, however, is not perceived by adolescents, who claim they do not see any difference compared to

the monitoring carried out by their parents.

Regarding behavioral problems, was found a significant difference only in the scores for the internalizing problems of female and male and paired-samples t-tests showed a significant difference in the scores for the mothers' perception about the internalizing problems and fathers' perception.

Based on these preliminary results, the following chapter (Chapter 3) will focus on the preadolescents perception of their wellbeing. The study main aim was to explore the relationship among attachment, parental monitoring and behavioral problems in a sample of preadolescents.

References

Achenbach, T.M. (1991a). *Manual for the Child Behavior Checklist 4/18 and 1991 Profile*. University of Vermont, Department of Psychiatry, Burlington.

Achenbach, T.M. (1991b). *Manual for the Teacher Report Form and 1991 Profile*. University of Vermont, Department of Psychiatry, Burlington.

Achenbach, T.M. (1991c). *Manual for the Youth Self Report and 1991 Profile*. University of Vermont, Department of Psychiatry, Burlington.

Achenbach TM & Rescorla LA. *Manual for the ASEBA school-age forms & profiles*. Burlington: Research Centre for Children, Youth and Families, University of Vermont; 2001.

Brennan, K. A., Clark, C. L., & Shaver, P. R. (1998). Self-report measurement of adult romantic attachment: An integrative overview. In J. A. Simpson & W. S. Rholes (Eds.), *Attachment theory and close relationships* (pp. 46-76). New York: Guilford Press.

Crouter, A. C., & Head, M. R. (2002). Parental monitoring and knowledge of children. In M. H. Bornstein (Ed.), *Handbook of parenting* (Vol. 3: Being and becoming a parent, pp. 461–483). Mahwah, NJ, US: Erlbaum.

Fearon, R. P., Bakermans-Kranenburg, M. J., Van IJzendoorn, M. H., Lapsley, A. M., & Roisman, G. I. (2010). The significance of insecure attachment and disorganization in the development of children's externalizing behavior: a meta-analytic study. *Child Development*, 81(2), 435-456.

Frigerio, A., Cattaneo, C., Cataldo, M.G., Schiatti, A., Molteni & M., Battaglia, M. (2004). Behavioral and emotional problems among Italian children and adolescents aged 4 to 18 years as reported by parents and teachers. In *European Journal of Psychological Assessment*, 20 (2), pp.124-133.

Hollingshead, A.B. (1975). *Four-factor index of social status.* Unpublished manuscript, Yale University, Department of Sociology, New Haven, CT.

Human, L. J., Dirks, M. A., DeLongis, A., & Chen, E. (2016). Congruence and incongruence in adolescents' and parents' perceptions of the family: Using response surface analysis to examine links with adolescents' psychological adjustment. Journal of youth and adolescence, 45(10), 2022-2035.

Kerr, M. & Stattin, H. (2000). What parents know, how they know it, and several forms of adolescents' adjustment: Further evidence for a reinterpretation of monitoring. *Developmental Psychology*, 36, 366–380.

Kerr, M., Stattin, H., & Burk, W. J. (2010). A reinterpretation of parental monitoring in longitudinal perspective. *Journal of Research on Adolescence*, 20, 39–64.

Kiesner, J., Poulin, F. &Dishion, T. J. (2009). Adolescent Substance Use with Friends: Moderating and Mediating Effects of Parental Monitoring and Peer Activity Contexts. *Merrill Palmer Q (Wayne State Univ Press)*, 56(4), pp. 529–556.

Kuczynski, L., & Parkin, M. (2007). Agency and bidirectionality in socialization: Interactions, transactions, and relational dialectics. In J. E. Grusec & P. Hastings (Eds.), *Handbook of socialization* (pp. 259–283). New York, NY: Guilford.

Laird, R. D., & Marrero, M. M. (2010). Information management and behavior problems: Is concealing misbehavior necessarily a sign of trouble? *Journal of Adolescence*, 33, 297–308.

Laird, R. D., Marrero, M. M., & Sentse, M. (2010a). Revisiting parental monitoring: Evidence that parental solicitation can be effective when needed most. *Journal of Youth and Adolescence*, 39, 1431–1441.

Lollis, S. (2003). Conceptualizing the influence of the past and the future in present parent-child relationships. In L. Kuczynski (Ed.), *Handbook of dynamics in parent-child relations* (pp. 67–87). Thousand Oaks, CA: Sage.

Madigan, S., Atkinson, L., Laurin, K., & Benoit, D. (2013). Attachment and internalizing behavior in early childhood: A meta-analysis. *Developmental Psychology*, 49(4), 672.

Miranda, M., Bacchini, D. & Affuso, G. (2011). Validazione di uno strumento per la misura del parental monitoring in un campione di adolescenti italiani. *Giornale di Psicologia dello Sviluppo*, 101, 32–47.

Moretti, M. M., McKay, S., & Holland, R. (2000). *The Comprehensive Adolescent- Parent Attachment*

Inventory (CAPAI). Unpublished measure and data. Simon Fraser University, Burnaby, British Columbia, Canada.

Ohannessian, C. M., Lerner, J. V., Lerner, R. M., & von Eye, A. (2000). Adolescent-parent discrepancies in perceptions of family functioning and early adolescent self-competence. *International Journal of Behavioral Development*, 24(3), 362-372.

Racz, S. J., & McMahon, R. J. (2011). The relationship between parental knowledge and monitoring and child and adolescent conduct problems: A 10-year update. *Clinical Child and Family Psychology Review, 14*, 377-398.

Smetana, J. G. (2011). *Adolescents, families, and social development: How teens construct their worlds.* West Sussex, UK: Wiley-Blackwell.

Waters, E., Merrick, S., Treboux, D., Crowell, J., & Albersheim, L. (2000). Attachment security in infancy and early adulthood: A twenty-year longitudinal study. *Child Development*, 71(3), 684- 689.

CHAPTER 3

"BEHAVIORAL PROBLEMS: PARENTAL MONITORING AND INSECURE ATTACHMENT IN EARLY ADOLESCENTS"

"It will happen, but it will take time."

John Bowlby

Chapter Plan: The previous chapter (Chapter 2) provided a profile of preadolescents, their parents and teachers and some preliminary descriptive results. The present chapter (Chapter 3) will focus on the preadolescents perception of their behavioral problems. The study main aim is to explore the relationship among attachment, parental monitoring and behavioral problems in a sample of preadolescents. In particular, the main goal is to investigate how monitoring and insecure attachment are related and how each of these variables and their interaction may lead to emotional and behavioral problems.

3.1 Introduction

Early adolescence and adolescence are two important periods of life that are mostly associated with a broad range of behaviors, including aggression, oppositionality and delinquency which are related to several negative outcomes in later adolescence and adulthood, including school dropout, unemployment, and criminal behavior (Fergusson & Horwood, 1998; Jessor, 1998; Loeber & Dishion, 1983). Adolescence is an age period with fast and fundamental alterations in biological, cognitive, social, and emotional domains (Lerner & Steinberg,2009).

During this developmental phase, many areas of life are accompanied by intense negative emotions in daily life (Silk, Steinberg, & Morris, 2003) with often unstable peer or romantic relationships (Furman & Collins, 2009), and a decrease in perceived support from parents (Furman & Buhrmester, 1992). However, there is also variation within the adolescent period. In particular, early adolescence is characterized by a higher rate of conflicts with parents (Laursen, Coy, & Collins, 1998) and a higher variability of negative emotions compared to late adolescence (Larson, Moneta, Richards, & Wilson, 2002). This is a period of increased striving for autonomy (Steinberg, 1990), and normal development requires that the adolescent is accorded sufficient "space" to assert an independent sense of identity, while still maintaining connection to the parents. In contrast to early adolescence, during middle adolescence the conflicts with parents become more emotional (Laursen et al., 1998), and agreeableness and conscientiousness both decrease whereas neuroticism increases (Soto, John, Gosling, & Potter, 2011).

The first line of research provides evidence that monitoring and attachment each predict adolescents' behavioral problems independently. Substantial empirical evidence demonstrates that certain monitoring scales predict poorer developmental outcomes (Pettit et al., 2007) and that insecure attachment in adolescence predicts multiple adjustment problems including internalizing and externalizing symptoms (e.g., Doyle & Moretti, 2000; Rice, 1990).

A second line of research provides evidence that parental monitoring has both a direct and indirect effect on behavioral problems and delinquent behavior. The indirect effect of parental monitoring on delinquent behavior was mediated through the adolescents' involvement with delinquent peers (Ingram et al., 2007).

Moreover, in another study, Dishion, Patterson, Stoolmiller, and Skinner (1991) found poor parental monitoring in middle childhood to be a significant factor in children's movement into a deviant peer network in early adolescence, after controlling for prior levels of peer rejection and antisocial behavior. Although many studies have focused on adequate monitoring as a protective factor (e.g. Curtner-Smith & McKinnon-Lewis, 1994; Dishion, Capaldi, Spracklen, & Li, 1995), few studies have considered that monitoring activities and parental knowledge may be influenced by child behavior problems. Instead, starting from the paper of Stattin & Kerr (2000), parental monitoring needs a reinterpretation with respect to the previous studies. Parental monitoring comprises “parental knowledge” (what the parents know about their children) and the sources of the parental knowledge (disclosure, control, solicitation).

There was less evidence that parenting affected child behavior; parental warmth and control at a given age did not consistently predict child externalizing and internalizing behavior at the next age, but some effects were found in mid to late childhood rather than early adolescence. Parents appear to react to high child externalizing or internalizing behavior by decreasing subsequent warmth and increasing subsequent control. Child-driven effects on parents’ behavior appear to occur across the entirety of the transition from late childhood (i.e., ages 8–9) to early adolescence (i.e., ages 10–13). Together these findings suggest that parenting theories that hinge on parental warmth and control have broad applicability across cultural groups and that child-effects play an important role, as Lansford at al. (2018) found more evidence form similarities than differences across groups in the ways that parental warmth and control are related to child externalizing and internalizing behaviors.

Emotional and behavioral problems

Early-adolescence is an age period in which the occurrence of behavioral problems changes dramatically; in particularly internalizing problems have been found to increase from early adolescence onwards, whereas externalizing problems have been found to decrease over the course of adolescence (Bongers, Koot, van der Ende, & Verhulst, 2003; Leve, Kim, & Pears, 2005). Although internalizing and externalizing problems are qualitative different types of problem behaviors, they also have been found to be closely related during adolescence (Wolff & Ollendick, 2006). Several large-scale epidemiological studies among adolescent general populations have consistently shown that co-occurrence is a very common phenomenon, and that it reaches a peak during middle adolescence (Angold, Costello, & Erkanli, 1999). Adolescents showing both internalizing and externalizing problems are at increased risk for later maladjustment (Colman et al., 2009; Fergusson & Woodward, 2002).

Adolescents' psychosocial adjustment takes place in the context of a changing parent-adolescent relationship (Laursen & Collins, 2009). Several theories suggest a link between the quality of parent-adolescent relationships and adolescents' behavioral problems. For example, attachment theory (Bowlby, 1980) holds that secure, warm, and supportive relationships with parents play an important role in adolescents' adjustment. In a similar vein, the autonomy-relatedness perspective (Grotevant & Cooper, 1986) indicates that for healthy functioning, adolescents' autonomy should be encouraged within a warm and supportive relationship.

Moreover, during early adolescence important changes may occur in aggressive behavior and depressive symptoms (e.g., Bongers, Koot, van der Ende, & Verhulst, 2003; Leve, Kim, & Pears, 2005). The studies suggested that girls' internalizing behavior significantly increased over time, whereas boys' internalizing behavior remained fairly stable. This pattern of results resembles that of prior studies. For example, Bongers et al. (2003) found significant increases for girls' but not boys' internalizing trajectories from age 4–18 and reported mean levels at each time

point that were nearly identical to those in the current study. The tendency for girls to show greater increases in depression and anxiety than boys during adolescence has been theorized to relate to girls' increased vulnerability and reactivity to stressful events involving others, girls' greater rumination about events and emotions, and sex-differential socialization pressures (Leadbeater, Blatt, & Quinlan, 1995; Zahn-Waxler, Klimes-Dougan, & Slattery, 2000). Interpersonal stressors such as relationship problems with peers or family members might be increasingly stressful during puberty, when girls develop more negative body images than boys (Allgood-Merten, Lewinsohn, & Hops, 1990). Such biological and environmental factors might precipitate increases in normative levels of girls' internalizing behavior during adolescence.

On the other hand, externalizing behavior decreased for both sexes over time, replicating prior studies using the CBCL in this age range (e.g., Bongers et al., 2003). As with internalizing behavior, the mean levels of externalizing behavior at each age were nearly identical to those reported in population-based studies (Bongers et al., 2003). The decrease in externalizing behavior may have resulted in part because externalizing behavior is likely to be more overt during early childhood but more covert during late childhood and adolescence. For example, the frequency of overt physical aggression from childhood to adolescence generally declines, but more concealed externalizing behaviors such as vandalism and theft increase (Lacourse et al., 2002; Tremblay, 2000). Thus, parents may not know the full range of externalizing behaviors in which adolescents engage, and externalizing behavior may be reported as declining during adolescence. One limitation of this study is the reliance of parent-reported (vs. self-reported) behavior problems.

Nevertheless, surprisingly limited attention has been given to the temporal ordering of aggressive behavior and depressive symptoms during early adolescence, while knowledge about this is critical for the development of effective preventive interventions. Specifically, the relationship among behavioral problems, monitoring and attachment will be discussed in the

following paragraphs (called “Monitoring” and “Insecure attachment”).

Monitoring

‘‘Do your parents know where you are when you are away from home?’’

(Stattin et al., 2010)

Parental monitoring is a core aspect of family relationships that may help to promote adaptation and prevent youths from going astray (Lionetti et al., 2016). Accordingly, it has received significant attention from developmental psychologists interested in studying adolescent social and emotional development. For instance, differences in the quality of parental monitoring have been linked to adolescent antisocial behavior, delinquency, substance use, deviant relationships, and failure to adhere to medical guidelines (Soenens et al., 2006; Darling et al., 2008; Laird et al., 2008; Smetana, 2008; Keijsers et al., 2009; Kiesner et al., 2009; Racz & McMahon, 2011; Fosco et al., 2012; Tolan et al., 2013).

Parental monitoring has been conceptualized as tracking and surveillance but operationalized as knowledge of daily activities. The seminal work of Stattin and Kerr (Stattin & Kerr, 2000; Kerr & Stattin 2000, 2003a, b) has challenged the field to reinterpret the construct of parental monitoring, focusing on the active components of this parenting behavior. They hypothesized three possible sources of monitoring considered as parental knowledge (gained about children and their activities: (a) child disclosure (children tell parents about their activities spontaneously), (b) parental solicitation (parents ask children and/or children’s friends for information), and (c) parental control (parents use rules and restrictions to limit children’s ability to engage in activities without informing their parents). Parental solicitation and control are considered to be active parental efforts to attend to and track children’s activities, whereabouts, and peer associations.

It is also important to acknowledge that the structure of parental monitoring changes as the

child moves from childhood to adolescence. During childhood, parental monitoring takes place mostly within the context of both home and school. As the child grows into adolescence and young adulthood, parents must adjust their techniques to monitor the teenager's unsupervised activities with peers and within the broader community. Inadequate parental monitoring is widely recognized as a risk factor for the development of child and adolescent behavioralproblems.

Throughout Stattin and Kerr's studies (Kerr & Stattin 2000, 2003a; Stattin & Kerr 2000) were found that higher levels of child disclosure and parental control and lower levels of parental solicitation predict lower levels of conduct problems, with child disclosure as the best predictor of conduct problems. This finding is surprising, given that researchers have previously assumed that parental solicitation would be associated with fewer conduct problems (e.g., Dishion & McMahon, 1998). The interpretation of this finding could suggest that the more parents ask children about their whereabouts and activities, the more likely children are to engage in problematic behaviors.

Following this viewpoint, Stattin and Kerr (2000) suggested that children may view parental solicitation as invasive and overly controlling and may react to this intrusion by engaging in even more conduct problems. Alternatively, this finding could also indicate that increased levels of parental solicitation are a reaction to children with concurrently high levels of problematic behavior. However, several longitudinal analyses have documented that more parental solicitation predicts more child conduct problems, even after controlling for current and prior levels of child conduct problems (Kerr et al. 2010; Kiesner et al. 2009; Willoughby & Hamza, 2011). Furthermore, parental control has been found to lead to negative feelings of being controlled among adolescents (Kerr & Stattin, 2000). These feelings of being controlled were associated with a range of adjustment problems, including depression and low self-esteem. Parental solicitation and control also do not appear to encourage future child disclosure nor determine future conduct problems (Kerr et al. 2010). This evidence suggests that parental monitoring may not be as effective as previously thought and may in fact have a negative effect

on children's adjustment and behavior.

The authors also found support for direct and indirect (through parental knowledge) effects of parental control and solicitation on child conduct problems. These findings led Fletcher and colleagues (1995; 2004) to conclude that parental monitoring does matter and can have a direct influence on the likelihood that children will engage in conduct problems. Stattin and Kerr (Stattin & Kerr, 2000; Kerr & Stattin 2000, 2003a, b; Kerr et al. 2010) have been careful in framing their conclusions and interpretations of their findings, stating that they do not believe that parents have no influence on child behavior. Rather, Stattin and Kerr have noted that there was still a relationship between parental monitoring and child conduct problems in their studies, even after controlling for child disclosure.

Child disclosure has also consistently been found as the strongest predictor of parental knowledge (parental monitoring) when compared to parental solicitation and control, even among children with initial high levels of conduct problems and regardless of the quality of the parent–child relationship (Crouter & Head, 2002; Kerr & Stattin, 2000; Stattin & Kerr, 2000). This strong link between child disclosure and parental knowledge has been replicated in many studies (Eaton et al. 2009; Keijsers et al., 2009, 2010; Soenens et al., 2006; Vieno et al., 2009; Willoughby & Hamza, 2011). Given the consistent evidence that child disclosure is strongly and positively related to parental knowledge, it is important to determine what factors promote or prevent children from openly providing information to their parents.

Several avenues have been proposed, including the need for parents to create an open and interactive home environment to encourage child disclosure (Kerr & Stattin, 2000; Stattin & Kerr, 2000). Along these lines, a positive parent– child relationship is positively related to the child's disclosure and negatively related to conduct problems (Vieno et al., 2009). Similarly, high levels of parental trust (Kerr et al., 1999; Smetana and Metzger, 2008; Smetana et al. 2006), authoritative parenting (Darling et al., 2006), engagement in enjoyable family activities (Keijsers et al., 2010; Willoughby & Hamza, 2011), and parental responsiveness (Soenens et al., 2006) are strongly

linked to high levels of child disclosure. Another way in which parents can promote child disclosure is responding in a positive manner during previous disclosure efforts (Hayes et al., 2003, 2004; Kerr & Stattin, 2000; Tilton-Weaver et al., 2010). These findings suggest several ways in which parents can enhance the likelihood of child disclosure, such as spending time with their child, being warm and responsive to their child's needs and enhancing the quality of the parent–child relationship.

Research attention has increasingly focused on children and adolescents as ''information managers'' who strategically determine what and how much their parents know about their activities and peer associations (Tilton-Weaver & Marshall, 2008). Adolescents may choose to keep information from their parents for any number of reasons, such as hiding maladaptive behavior, wanting to avoid punishment for problematic behavior, establishing autonomy, or maintaining boundaries and privacy (Finkenauer et al., 2002; Smetana & Metzger, 2008). Adolescents also engage in a wide variety of strategies to keep information from their parents, including nondisclosure, avoiding, lying, and secrecy (Keijsers & Laird, 2010; Smetana, 2008). Secrecy and concealment longitudinally predict more engagement in delinquent behavior (Frijns et al., 2010) whereas disclosure predicts less antisocial behavior (Laird & Marrero, 2010, 2010a, 2010b). Therefore, the type of nondisclosure strategy has important implications for later adolescent problem behavior.

In summary, the evidence largely supports the important role that child disclosure plays in the parental monitoring process. Implications from these findings highlight the need to consider how both parents and children contribute to parental monitoring. Therefore, an important area of future research should include an exploration of additional factors that might have an influence on the relationship between adolescent conduct problems and parental monitoring.

Insecure attachment

"A basic principle of attachment theory is that attachment relationships continue to be important throughout the life span"

(Bowlby, 1977, 1980, p. 18)

Attachment theory predicts that, over the course of development, experiences of parental availability and responsiveness are increasingly internalized in the form of expectations about the self and others in close relationships (Bowlby, 1973; Kobak, Cole, Ferenz-Gillies, Fleming, & Gamble, 1993). These expectations constitute the foundation of attachment orientation or style—patterns of interpersonal dispositions and strategies that work to maintain one's felt security within attachment relationships (Ainsworth, Blehar, Waters, & Wall, 1978; Bartholomew & Horowitz, 1991).

Although current experiences continue to influence attachment orientation throughout development, attachment in adolescence is probably best understood not as a purely relational construct, but as a combination of intrapsychic processes (e.g., internalized representations based on past relationships) and interpersonal influences (e.g., current experiences in close relationships) (Allen, Boykin, McElhaney, Land, Kuperminc, Moore, O'Beirne-Kelly, & Kilmer, 2003). In short, both theory and empirical evidence support the conceptualization of adolescent attachment orientation in terms of relatively stable intra-personal dimensions that interact with, and change in response to, ongoing interpersonal experiences.

Many authors now prefer to label these dimensions as Anxiety (related to negative view of self in close relationships) and Avoidance (related to negative view of close others in relationships), shifting focus to the immediate affective and behavioral aspects of these dimensions rather the working models presumed to underlie them. Most current models of attachment are, either implicitly or explicitly, based on these two general dimensions (Welch &

Houser, 2010; Larsen & Buss, 2013).

Particularly influential in the field, Bartholomew's four-category model of attachment illustrates how differences in attachment orientation may be described both in terms of general prototypes and as functions of underlying dimensions of anxiety and avoidance (Bartholomew & Horowitz, 1991). Moreover, the theory makes important distinctions between different forms of "avoidant" attachment, predicting different problems in interpersonal and psychological functioning for *Fearful* individuals (whose avoidance occurs in the context of high anxiety) and *Dismissing* individuals (whose avoidance occurs in the context of low anxiety). Based on studies of adolescent and adult attachment, such distinctions appear meaningful (e.g., Lessard & Moretti, 1998; Moretti, Lessard, Scarfe, & Holland, 1999; Simpson & Rholes, 2002).

Unfortunately, lack of validated self-report measures designed for dimensional analyses have limited research on the role of anxiety and avoidance in adolescent development. Recently, however, Moretti and her colleagues have developed a new measure of adolescent-parent attachment, the Adolescent-Parent Attachment Inventory (APAI; Moretti, McKay, & Holland, 2000), designed for continuous ratings on dimensions of anxiety and avoidance, while at the same time allowing categorization of major attachment styles. The APAI (discussed in more detail in subsequent sections) provides new opportunities for studies of attachment dynamics in adolescence.

3.2 Objectives

The main aim of this study is to explore the relationship among attachment, parental monitoring and behavioral problems of preadolescents, as perceived by these later.

Specifically, the first aim is to explore the factorial structure of the attachment scale, named Adolescent-Parent Attachment Inventory (APAI; Moretti et al., 2000), as suggested by Moretti and colleagues in their Adolescent Health Lab at Simon Fraser University in Canada. The second specific aim is to investigate the associations between attachment and parental monitoring as

predictors of behavioral problems of preadolescents', starting from the total scores of each variable.

Our working hypothesis are:

1. The APAI and its subscales (avoidance and anxiety) would demonstrate good internal consistency and satisfy criteria for goodness of fit derived from an Exploratory Factor Analysis EFA of the current factor structure (Moretti, McKay, & Holland, 2000).
2. Attachment total score and gender may moderate the effects of monitoring total score on behavioral problems total score, after controlling participants' SES;
3. Attachment anxiety and gender may moderate the effects of adolescent disclosure on internalizing problems;
4. Attachment avoidance and gender may moderate the effects of adolescent disclosure on externalizing problems;
5. Attachment anxiety and gender may moderate the effects of parental solicitation on internalizing problems;
6. Attachment avoidance may moderate the effects of parental solicitation on externalizing problems, after controlling gender.

3.3 Method

3.3.1 Sample

Adolescents were recruited from several secondary schools in the city and province of Pavia (Italy). 325 preadolescents answered the questionnaires. The mean age of adolescents' was 13.2 (*SD*= 0.5; range = 12-16 years), 44% were male *(M age = 13.26, SD= 0.6; range = 12-16 years)* and 56% female *(M age = 13.13, SD= 0.4; range = 12-15 years).*

3.3.2 Measures

Attachment. The Adolescent-Parent Attachment Inventory (APAI, Moretti, McKay, & Holland, 2000), was used to assess attachment orientation of preadolescents. It is a measure of adolescent-parent attachment adapted from Brennan, Clark, and Shaver's (1996) unpublished measure of adult romantic attachment. (A shorter version of this measure, the Experiences in Close Relationships questionnaire (ECR, Brennan, Clark, & Shaver, 1998) was published subsequently.

APAI consists of two major scales (9 items each, scored on a 7-point Likert-type scale) designed to provide continuous ratings on dimensions of Anxiety and Avoidance (for more detailed information about the questionnaire, see Chapter 2, p. 7 and Appendix B and C).

Parental monitoring. The Parental Behavioral Control Scale (Kerr & Stattin, 2000) was used to measure parents' degree of monitoring. It is a 5-item scale that assesses the extent to which adolescents need to have permission to go out with friends, to finish their homework before going out, and to have permission to spend their money (for more detailed information about the questionnaire, see Chapter 2, p. 8).

The overall ratings were as follows: (1) 'Almost never', (2) 'Rarely', (3) 'Sometimes', (4) 'Often', (5) 'Very often'. The scale has been validated in an Italian context (Miranda et al., 2011; Kiesner et al., 2009).

In the present study, we analyzed adolescent disclosure and parental solicitation scales as they are potential sources of preadolescents' perception and behavior about their parents (Kerr & Stattin, 2000).

Behavioral and emotional problems. YSR/11-18 (*Youth Self-Report)* is a standardized

screening questionnaire internationally used to identify emotional/behavioral problems and social competencies in adolescents (Achenbach, 1991c). Two scales of the behavior profile, namely Internalizing and Externalizing scales, were analyzed in the present study and were filled out by preadolescents (for more detailed information about the questionnaire, see Chapter 2, p. 9).

The scale has been validated in an Italian context (Frigerio et al., 2004; Miranda et al., 2011).

3.3.3 Procedure

For a detailed description of the procedure, see Chapter 2, Paragraph 2.2.2, p. 14.

3.3.4 Analytic plan

Initial descriptive analyses examined means and standard deviations across and within gender (Chapter 2, Table 2, p. 18) and intercorrelations of major dependent and independent variables related to preadolescents (Chapter 2, Table 3, p. 19).

APAI's factor structure was examined through an ExploratoryFactor Analysis (EFA) using SPSS software (Statistical Package for Social Science software, version 21.0). For a more detailed description, see Results, paragraph 3.4.2.

Next, in order to inquire the association between variables, moderation analysis was performed using PROCESS (Hayes, 2012), a computational tool for mediation, moderation, and mediated moderation models of observed effects that runs under SPSS (Statistical Package for Social Science software, version 21.0).

3.4 Results

3.4.1 APAI: Exploratory Factor Analysis

The factor structure of APAI was examined using Exploratory Factor Analysis (EFA).

The reason why this type of factor analysis was chosen and not the confirmatory one is due

to the fact that the short version of the questionnaire was new. It was necessary, first of all, an Exploratory Factor Analysis.

Only 15 of the 16 APAI items were designed to measure Anxiety and Avoidance; therefore, analyses concentrated first on the original subset of items and then on the new one.

The results of EFA were largely consistent with our hypothesized factor structure, but there are some differences between the original structure and the final one after EFA was performed. As shown below, the second scree plot declined more rapidly following the first two factors, revealing two major dimensions accounting for 39% of variance in the items. The third and subsequent factors each accounted for no more than 8% of item variance.

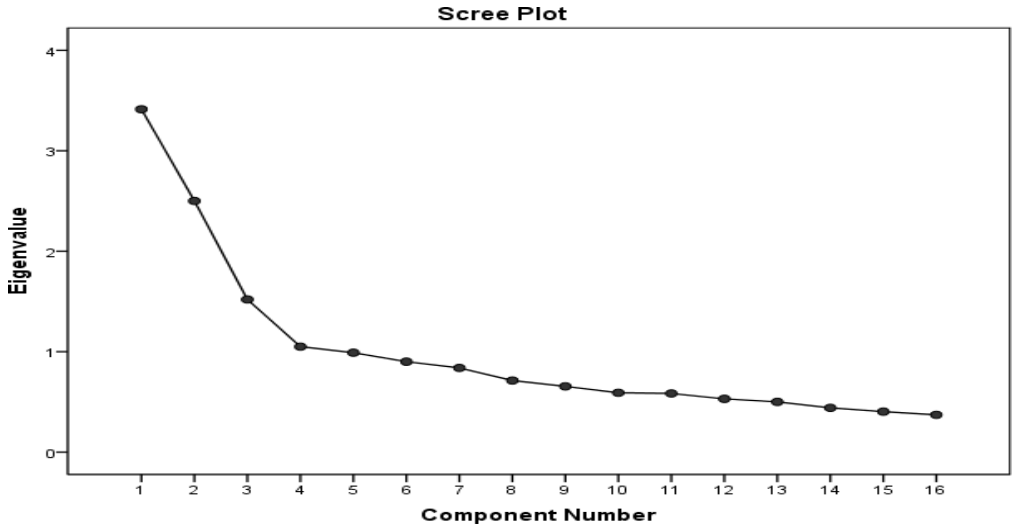


***Figure 8*. EFA scree plot for the original APAI**

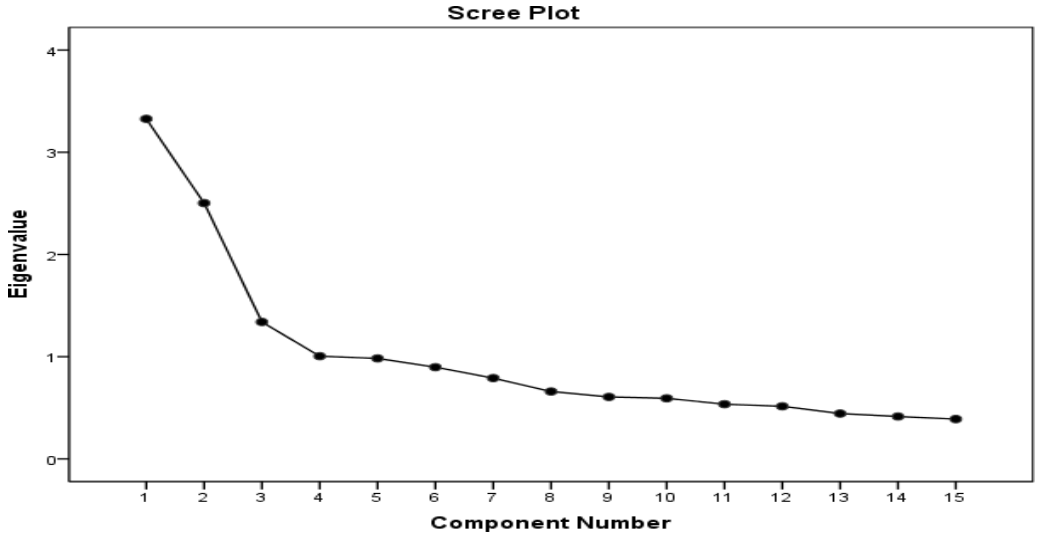


***Figure 9*. EFA scree plot for the new APAI, after removing item 6**

The factor pattern obtained through oblique rotation to simple structure (promax, kappa=4) was consistent with the hypothesized model. As can be seen in the following table, items loaded largely as expected, with the majority of pre-specified Avoidance items loading on Factor 1, and Anxiety items loading on Factor 2.

Pattern Matrix[a]

	Component	
	1	2
capai_ys_c1		,469
capai_ys_c2		,767
capai_ys_c3r	,311	
capai_ys_c4		,623
capai_ys_c5		,660
capai_ys_c6		
capai_ys_c7		,422
capai_ys_c8r	,530	
capai_ys_c9		,640
capai_ys_c10r	,694	
capai_ys_c11r	,614	
capai_ys_c12		,504
capai_ys_c13r	,650	
capai_ys_c14		,600
capai_ys_c15r	,759	
capai_ys_c16r	,727	

Extraction Method: Principal Component Analysis.
Rotation Method: Promax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

Pattern Matrix[a]

	Component	
	1	2
capai_ys_c1		,497
capai_ys_c2		,768
capai_ys_c3r	,317	
capai_ys_c4		,619
capai_ys_c5		,681
capai_ys_c7		,423
capai_ys_c8r	,543	
capai_ys_c9		,630
capai_ys_c10r	,699	
capai_ys_c11r	,609	
capai_ys_c12		,490
capai_ys_c13r	,652	
capai_ys_c14		,585
capai_ys_c15r	,764	
capai_ys_c16r	,724	

Extraction Method: Principal Component Analysis.
Rotation Method: Promax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

Table 7. **EFA rotated 2-factor solution for the APAI; Loadings less than .30 are suppressed for ease of interpretation; Component 2 denote Anxiety items, Component 1 denote Avoidance items.**
Table 8. EFA rotated 2-factor solution for the APAI, without item 6; Loadings less than .30 are suppressed for ease of interpretation; Component 2 denote Anxiety items, Component 1 denote Avoidance items.

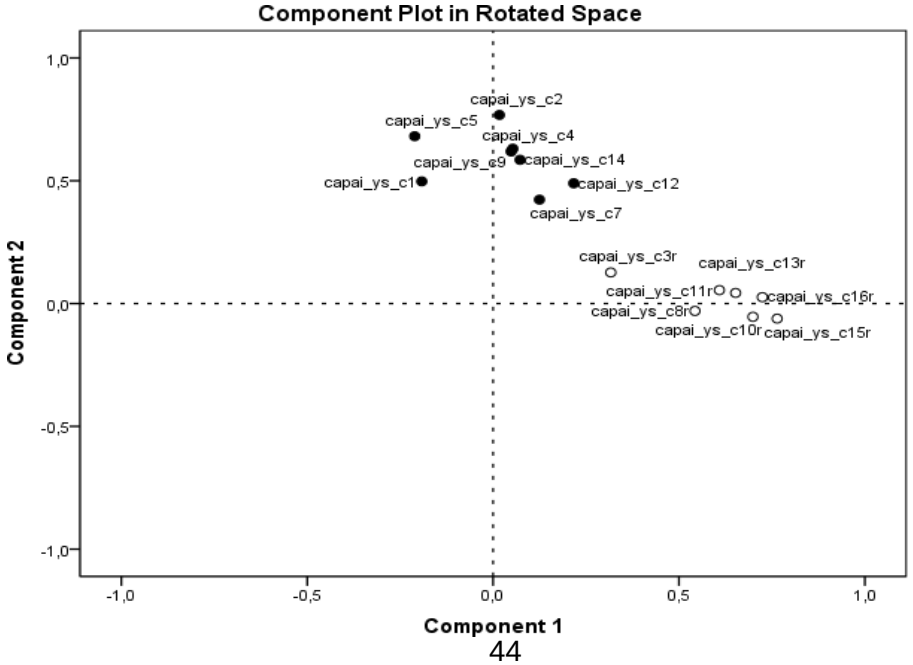


Figure 10. **EFA component plot in rotated space for the APAI, without item6; Component 2denoteAnxiety items, Component 1 denote Avoidance items.**

These findings are highly consistent with the results of previous research investigating standard psychometric evaluations of the factorial structure and reliability of the APAI in comparable samples (Steiger & Moretti, 2003; 2005).

First, close investigation of the rotated factor pattern revealed that several items did not load as expected; item 12 ("I want to get close to my parent but I keep pulling back"), a pre-specified Avoidance item, resulted loading on Anxiety than Avoidance factor. Instead, item 6 ("I try to avoid getting too close to my parent"), a pre-specified Avoidance item, does not load neither on the Anxiety nor on Avoidance factor. These results pointed to a possible potential conceptual overlap between dimensions of Anxiety and Avoidance. Acceptable values for Cronbach's alpha were obtained for both scales ($\alpha = .74$ for Avoidance; $\alpha = .73$ for Anxiety); however, inter-item correlations were somewhat variable ($r = .07$ to $.47$ in the Anxiety scale; $r = .07$ to $.48$ in the Avoidance scale). These results supported only moderate unidimensionality of the scales and pointed to possible sub-dimensions in the original scales.

Overall, results were sufficiently supportive of the hypothesized factor structure to allow further analyses with the original scales. However, results also suggested that elimination of certain items and/or a more complex factor structure might provide an improved measurement instrument. For these reasons, the APAI version used has been the new one obtained after structure analysis and validation, without item 6 and with item 12 loading on the Anxiety factor. These results are reported in the Appendix.

The final questionnaire thus resulted in 7 items (3, 8, 10, 11, 13, 15, 16) on Avoidance Scale and 8 items (1, 2, 4, 5, 7, 9, 12, 14) on Anxiety Scales. In order to avoid scale unreliable total scores, subsequent analyses used only standardized total scores.

3.4.2 Moderation models

Hypothesis 2

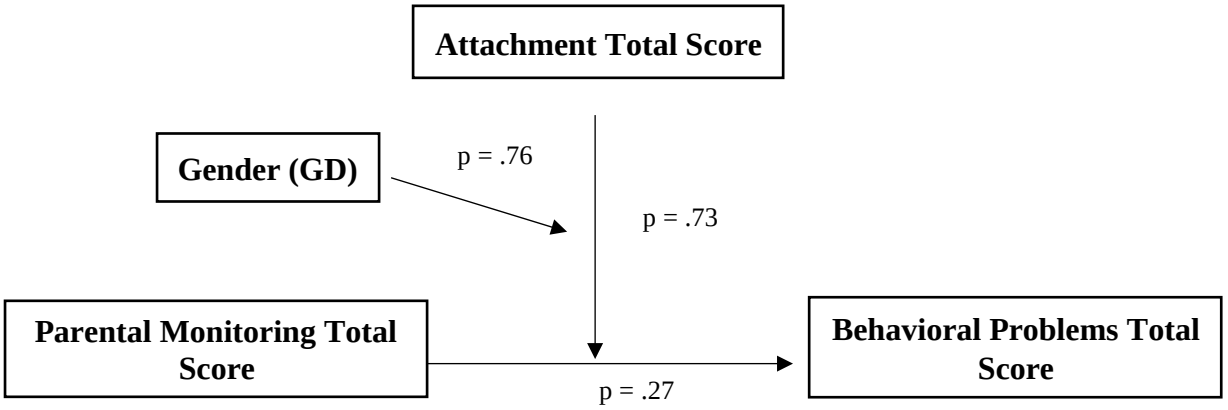


Figure 11. A conceptual diagram of the Moderation Model 3

Moderation analysis 3 examined the model where Parental Monitoring Total Score was considered as independent variable and Behavioral Problems Total Score as dependent variable. Gender (GD) and Attachment Total Score as moderators and SES status as a covariate were entered into the model.

In this model, neither the interaction effect considering two moderators (β = -.01, t = -.36, p = .71) nor the effect of IV on DV (β = .03, t = 1.09, p = .27) has been observed. In addition to total problems scores, we next explored emotional and behavioral problems of adolescents by considering the two scales of the same measure (YSR), namely internalizing and externalizing behavioral problems, in addition to total problems scores. We also explored parental monitoring by considering each scale separately.

Hypothesis 3

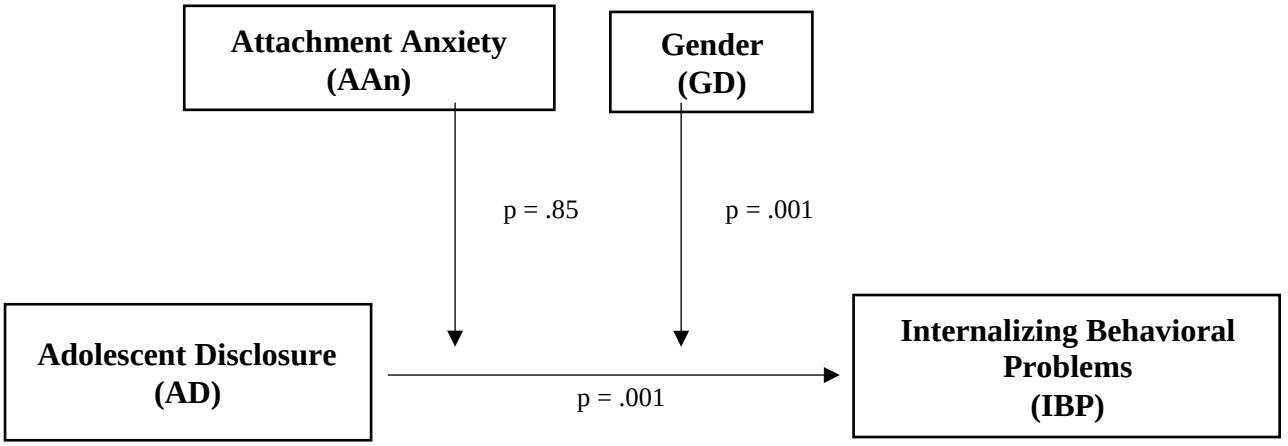


Figure 12. A conceptual diagram of the Moderation Model 2

Then, we tested whether Adolescent Disclosure (AD) could predict preadolescents' Internalizing Behavioral Problems (IBP) with the moderation effect of Attachment Anxiety (AAn) and Gender (GD). AD was considered as independent variable and preadolescents' IBP was the dependent variable. AAn and GD were entered as moderators into the model.

Overall the model ($R^2 = .23$, $F(5, 318) = 19.04$, $p = .001$) and the second interaction with GD as moderator was significant. Contrariwise the first interaction with AAn as moderator was not significant ($\beta = -.07$, $t = -.17$, $p = .85$). This result suggests that AD influences IBP in preadolescence, only if preadolescents are females ($\beta = -3.99$, $t = -4.29$, $p = .001$).

Specifically, the model affirms that female preadolescents that voluntary and spontaneously revealed to their parents about friends and/or activities attended experienced less Internalizing Behavioral Problems.

Hypothesis 4

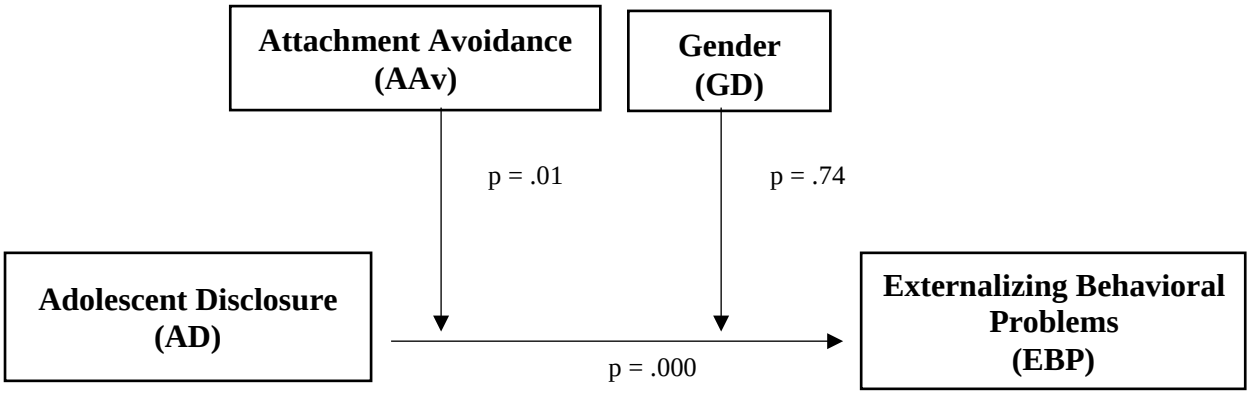


Figure 13. A conceptual diagram of the Moderation Model 2

AD was considered as independent variable and EBP as dependent variable. Attachment Avoidance (AAv) and Gender (GD) as moderators were entered into the model.

Overall the model (R^2 = .31, F(7, 316) = 29.80, p = .001) and the first interaction with AAv as moderator was significant. Instead the second interaction with gender as moderator is not significant (β = -.21, t = -.32, p = .74).

This result suggests that AD predicts EBP in preadolescence, only in preadolescents with a low and medium AAv (β = 1.12, t = 2.35, p <.01). Specifically, the model affirms that preadolescents with a low and medium level of attachment avoidance, that voluntary and spontaneously revealed to their parents about friends and/or activities, experienced less Externalizing Behavioral Problems.

Hypothesis 5

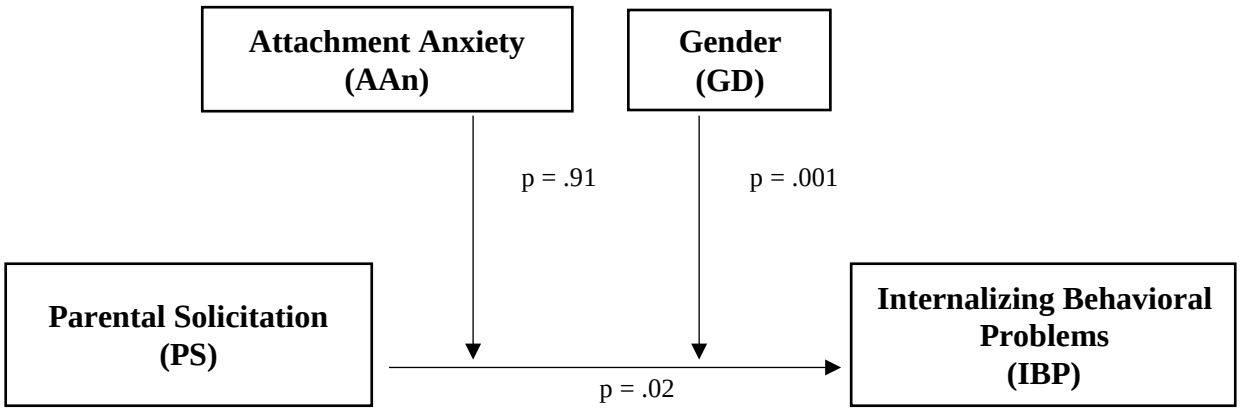


Figure 14. A conceptual diagram of the Moderation Model 2

Furthermore, we tested whether PS could predict preadolescents' IBP. PS was considered as independent variable and preadolescents' IBP was the dependent variable. AAn and GD were entered as moderators into the model.

In this model, the first interaction (PS x GD) effect was significant (β = -6.96, t = -4.40, p = .001), while the effect of PS x AAn (β = .07, t = .10, p = .91) wasn't observed. Specifically, the model affirms that female preadolescents whose parents asked more frequently information about their activities and social friendships attended experienced less Internalizing Behavioral Problems.

Hypothesis 6

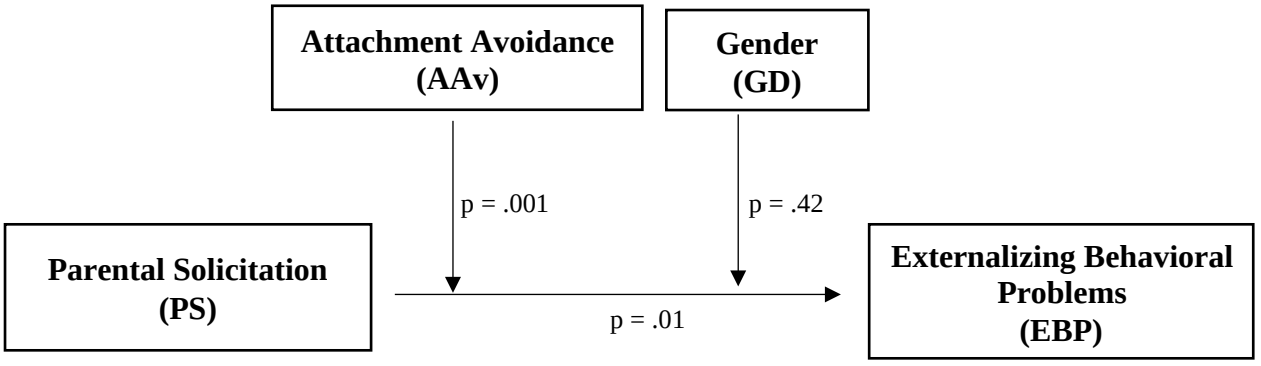


Figure 15. A conceptual diagram of the Moderation Model 2

Finally, we tested whether PS could influence preadolescents' with EBP. PS was considered as independent variable and preadolescents' EBP was the dependent variable. Attachment Avoidance (AAv) and Gender (GD) were entered respectively as moderator and covariate variable into the model.

Overall the model ($R^2 = .03$, $F(4, 320) = 3.06$, $p < .01$) and the interaction with AAv as moderator was significant ($\beta = 2.50$, $t = 2.74$, $p < .01$). Contrariwise the effect of PS x GD ($\beta = -1.09$, $t = -.8$, $p = .42$) wasn't observed.

Specifically, the model affirms that preadolescents with a low and medium level of attachment avoidance, that are more frequently asked for reporting about friends and/or activities attended, experienced more Externalizing Behavioral Problems.

3.5 Discussion

The main aim of this study was to explore the relationship among attachment, parental monitoring and behavioral problems in a sample of preadolescents.

Specifically, the first aim was to explore the factorial structure of the attachment measure, namely the Adolescent-Parent Attachment Inventory (APAI; Moretti et al., 2000), as suggested by Moretti and colleagues in their Adolescent Health Lab. The second specific aim was to investigate the associations between attachment and parental monitoring as predictors of behavioral problems in preadolescents, starting from the total scores of each variable. Analyses suggested that parental solicitation and adolescent disclosure, as perceived by preadolescents, are associated with less behavioral problems. Our working hypothesis were all supported, with some differences.

The hypothesis that the APAI and its subscales (avoidance and anxiety) would demonstrate good internal consistency and satisfy criteria for goodness of fit derived from an EFA of the

proposed factor structure was partially supported.

Overall, results were reliably supportive of the hypothesized factor structure to allow further analyses with the original scales, but they also suggested that elimination of specific items and/or a more complex factor structure might provide an improved measurement model. For these reasons, the APAI version used was the new one, without item 6 and with item 12 loading on the Anxiety factor.

First of all, according to our second hypothesis, through the first model of moderation, it was hypothesized that parental monitoring could predict emotional behavioral problems. Gender and attachment have been incorporated as moderators. The model was not significant. This result is probably related to the fact that the individual scales are more relevant than the totalscore.

Concerning the other hypothesis, parental solicitation and adolescent disclosure (monitoring' scales) always predicted both internalizing and externalizing behavioral problems. This finding is in line with previous studies on preadolescents' behavioral problems and monitoring. Parental control scale has not been inserted because it is not relevant in relation to emotional behavioral problems.

According to the results obtained in Stattin and Kerr's studies (Kerr & Stattin, 2000, 2003a; Stattin & Kerr 2000), higher levels of child disclosure and parental control and lower levels of parental solicitation predict lower levels of conduct problems, with child disclosure as the best predictor of conduct problems in these analyses. This finding was surprising, given that researchers have previously assumed that parental solicitation would be associated with fewer conduct problems (e.g., Dishion & McMahon, 1998). Actually, our results seem to provide support to both these findings, but with an important effect of gender and attachment variables; female preadolescents that are more solicitated by parents – i.e. who are more frequently asked about their activities, friends attendance and time organization - experienced less internalizing behavioral problems, but this is not the case for males preadolescents with a low and/or medium level of attachment avoidance. In this case they experienced more externalizing behavioral

problems. These results suggest that we must take into account the role of both gender and attachment as factors that plays a role in the relationship between parental solicitation and behavioral problems.

First, with respect to gender differences in these patterns of relations, girls' perceptions of high levels of parental solicitation were associated with fewer levels of adolescent-reported internalizing problems.

These findings suggest two alternative explanations: that girls who perceive their mothers as more intrusive/interested about their activities or attended friendships may react by responding with a decrease of internalizing problems, or, taking a more bidirectional view, that as girls increasingly show signs of internalizing problems, their mothers' use of psychologically controlling/solicitation strategies escalation, which in turn encourages the development of less internalized problem behaviors (Pettit et al., 2001).

Second, the literature affirms that insecure attachment in adolescence predicts multiple adjustment problems including internalizing and externalizing problems (e.g., Doyle & Moretti, 2000; Rice, 1990). It should be noted, however, that these previous studies have not fully investigated the possibility of moderation or mediation effects, thus trying to analyze putative mechanisms underlying this association. For example, Allen and his colleagues (Allen et al., 2002; Marsh et al., 2003) provide evidence that attachment preoccupation is associated with internalizing symptoms when maternal expressions of autonomy are low but, at the same time, it is associated with externalizing symptoms when maternal autonomy is high.

The present study provides evidence for the moderating effects of insecure attachment on behavioral problems, using parental solicitation as a predictor. Preadolescents with a low and medium level of attachment avoidance, that are more solicitated by parents about friends and/or activities, experienced more externalizing behavioral problems. This result suggests that preadolescents who perceive their mothers as more intrusive/interested about their activities or friends they attended may react with more externalizing problems, that is with more aggression

or anger outbursts, with a complementary effect of their attachment pattern that is predisposing them toward a negative view of others in close relationships. In fact, it has been argued that children in avoidant attachment relationships are more prone to externalizing problems such as aggression and hostility (e.g., Cassidy & Kobak, 1988; Renken, Egeland, Marvinney, Mangelsdorf, & Sroufe, 1989; Sroufe, 1983). Having experienced consistently unresponsive or rejecting caregiving, these children come to expect such treatment and react to others in an antagonistic manner.

Regarding adolescent disclosure, our results are actually similar to those of parental solicitation in fact, female preadolescents that voluntary and spontaneously talk and share with their parents about friends and/or activities experienced less internalizing behavioral problems. This result is in line with other studies: higher levels of adolescent disclosure have been related to fewer psychosocial problems during adolescence (Racz & McMahon, 2011). Adolescents are more willing to disclose information about their activities and whereabouts if they perceive their parents to be warm and supportive, which facilitates parents' ability to exert appropriate behavioral control and decreases adolescents' problem behaviors (Klevens & Hall, 2014).

Unlike of what just mentioned, preadolescents with a low and medium level of attachment avoidance, that voluntary and spontaneously revealed to their parents about friends and/or activities, experienced less externalizing behavioral problems. In this case, therefore, spontaneous communication is a significant protective factor against the development of emotional and behavioral problems, despite the presence of moderate avoidant attachment. This means that this could not be true in case of high level of attachment avoidance where the open communication could constitute a serious shortcoming in open communication within the family.

3.6 Strengths, limitations and future directions

Our results offer a significant contribution to the preadolescence literature because there is a clear paucity of studies that examine both parental monitoring and attachment and gender differences in this association over the course of behavioral problems in early adolescence.

Furthermore, this period of development has been poorly investigated by research and the present study has as its strength the fact of having put together and deepened three issues relevant to pre-adolescence, such as behavioral problems, parental monitoring and attachment.

These findings should be interpreted in light of several study limitations. First, this study focused on self-reported measures. Although the validity of the self-report measures used in this study is well-established (Kerr & Stattin, 2000; Kiesner et al., 2009; Achenbach, 1991c; Frigerio et al., 2004), future research is needed to evaluate these variables adding tools that evaluate them directly. Second, serious delinquent behaviors that are more common during adolescence than childhood are not captured by the CBCL (e.g., robbery and physical assault), which may also account for some results found in our study, such as the more internalizing problems perceived by females.

In addition, one other limitation should also be noted and addressed in future research. This include the lack of a part that assess the role of parenting styles, which does not allow us to determine whether the current findings would be the same. Researchers have demonstrated that parenting style continues to have important consequences for attachment security and psychological adjustment in adolescence and even adulthood (Doyle & Moretti, 2000; Karavasilis, Doyle, & Markiewicz, 2003; Scharf, Mayseless, & Kivenson-Baron, 2004). However, despite a general consensus that parenting is an important predictor of both attachment security and behavioral problems, relatively little research has examined the interaction between parenting style and attachment in predicting behavioral problems (Doyle & Markiewicz, 2005; Marsh, McFarland, Allen, McElhaney, & Land, 2003).

Finally, a separate mention deserves the choice of the APAI for evaluating attachment. The literature affirms that insecure attachment in adolescence predicts multiple adjustment problems including internalizing and externalizing symptoms (e.g., Doyle & Moretti, 2000; Rice, 1990). It should be noted, however, that these previous studies have not fully investigated the possibility of moderation or mediation effects. We have chosen this new tool in the Italian context with the intent to fulfill the need of a first step in psychometric properties analysis and validation in the Italian cultural context, starting from the back translation and the factorial analysis.

Although the measure owns acceptable psychometric properties and the factor structure and convergent validity of the APAI have been supported in previous research (Moretti & Obsuth, 2009; Moretti et al., 2015; Steiger, 2003, 2008; Steiger & Moretti, 2005; Steiger, Moretti, & Obsuth, 2009), in the present study no relevant results related to the role of attachment were found. As suggested (Steiger, 2008), although results indicated that elimination of certain items and/or a more complex factor structure might provide an improved measurement model, further confirmatory analysis of the APAI's factor structure would be required.

Based on these results, the following chapter (Chapter 4) will focus on a multi informant approach. The study main aim is to explore agreement and disagreement among preadolescents' and parents' ratings in relation to behavioral problems, insecure attachment and parental monitoring. A part will be dedicated also to teachers' ratings of behavioral problems.

References

Ainsworth, M. D. S., Blehar, M. C., Waters, E., & Wall, S. (1978). Patterns of attachment: A psychological study of the strange situation. *Hillsdale*, NJ: Erlbaum.

Allen, J. P., McElhaney, K. B., Land, D. J., Kuperminc, G. P., Moore, C. W., O'Beirne- Kelly, H., & Kilmer, S. L. (2003). A secure base in adolescence: Markers of attachment security in the mother-adolescent relationship. *Child Development*, 74(1), 292–307.

Allgood-Merten, B., Lewinsohn, P. M., & Hops, H. (1990). Sex differences and adolescent depression. *Journal of Abnormal Psychology*, 99, pp. 55–63.

Angold, A., Costello, E. J., & Erkanli, A. (1999). Comorbidity. J Child Psychol Psychiatry, 40(1), pp. 57-87.

Bartholomew, K., & Horowitz, L. M. (1991). Attachment styles among young adults: A test of a four-category model. *Journal of Personality and Social Psychology*, 61(2), 226–244.

Bongers, I. L., Koot, H. M., van der Ende, J., & Verhulst, F. C. (2003). The normative development of child and adolescent problem behavior. *J Abnorm Psychol*., 112(2):179-92.

Bowlby, J. (1973). *Attachment and loss: Vol. 2, Separation*. New York: Basic Books.

Bowlby, J. (1977). The making and breaking of affectional bonds. I. Aetiology and psychopathology in the light of attachment theory. An expanded version of the Fiftieth Maudsley Lecture, delivered before the Royal College of Psychiatrists, 19 November 1976. *The British Journal of Psychiatry*, 130, pp. 201-210.

Bowlby, J. (1980). *Attachment and loss: Vol. 3, Loss*. New York: Basic Books.

Brennan, K. A., Clark, C. L., & Shaver, P. R. (1998). Self-report measurement of attachment: An integrative overview. In J. A. Simpson & W. S. Rholes (Eds.), Attachment theory and close relationships (pp. 46–76). New York: Guilford Press.

Colman, I., Murray, J., Abbott, R. A., Maughan, B., Kuh, D., Croudace, T. J., & Jones, P. B. (2009). *Outcomes of conduct problems in adolescence: 40-year follow-up of national cohort. BMJ* (Clinical research ed.), 338(7688), a2981.

Crouter, A. C., & Head, M. R. (2002). Parental monitoring and knowledge of children. In M. H. Bornstein (Ed.), *Handbook of parenting* (Vol. 3: Being and becoming a parent, pp. 461–483). Mahwah, NJ, US: Erlbaum.

Curtner-Smith, M. E., & MacKinnon-Lewis, C. E. (1994). Family process effects on adolescent males' susceptibility to antisocial peer pressure. *Family Relations*, 43(4):462.

Darling, N., Cumsille, P., Caldwell, L.L., & Dowdy, B. (2006). Predictors of adolescents' disclosure to parents and perceived parental knowledge: Between- and within-person differences. *Journal of Youth and Adolescence*, 35, 667-678.

Darling, N., Cumsille, P., & Martínez, M. L. (2008). Individual differences in adolescents' beliefs about the legitimacy of parental authority and their own obligation to obey: a longitudinal investigation. *Child Dev.* 79,1103–1118.

Dishion, T. J, Capaldi, D. M., Spracklen, K. M., & Li, F. (1995). Peer ecology of male adolescent drug use. *Development and Psychopathology*. 7:803–824.

Dishion, T. J., & McMahon, R. J. (1998). Parental monitoring and the prevention of child and adolescent problem behavior: A conceptual and empirical formulation. *Clinical Child and Family Psychology Review*, 1, 61–75.

Dishion, T. J., Patterson, G. R., Stoolmiller, M., & Skinner, M. L. (1991). Family, school, and behavioral antecedents to early adolescent involvement with antisocial peers. *Developmental Psychology*, 27(1), 172-180.

Doyle, A. B., & Moretti, M. M. (2000). Attachment to parents and adjustment in adolescence: Literature review and policy implications. *Health Canada Report*.

Eaton, D. K, Kann, L., Kinchen, S., Shanklin, S., Ross, J., Hawkins, J. …& Centers for Disease Control and Prevention (CDC) (2010). Youth risk behavior surveillance - United States, 2009. *MMWR Surveill Summ*. 2010 Jun 4;59(5):1-142.

Fergusson, D. M., & Horwood, L. J. (1998). Early conduct problems and later life opportunities. *Journal of Child Psychology and Psychiatry*, 39, 1097–1108.

Fergusson, D. M., & Woodward, L. J. (2002). Mental health, educational, and social role outcomes of adolescents with depression. *Archives of General Psychiatry*, 59, 225-231.

Finkenauer, C., Engels, R.C.M. E., & Meeus, W. (2002). Keeping secrets from parents: Advantages and disadvantages of secrecy in adolescence. *Journal of Youth and Adolescence*, 2, 123-136.

Fletcher, A.C., Darling, N., & Steinberg, L. (1995). Parental monitoring and peer influences on adolescent substance use. In J. McCord (a cura di), *Coercion and punishment in long term perspectives*. New York: Cambridge University Press.

Fletcher, A. C., Steinberg, L., & Williams-Wheeler, M. (2004). Parental influences on adolescent problem behavior: Revisiting Stattin and Kerr. *Child Development*, 75, 781–796.

Fosco, G. M., Stormshak, E. A., Dishion, T. J., & Winter, C. E. (2012). Family relationships and parental monitoring during middle school as predictors of early adolescent problem behavior. *J. Clin. Child Adolesc. Psychol.* 41,202–213.

Fraley, R. C., & Waller, N. G. (1998). Adult attachment patterns: A test of the typological model. In J. A. Simpson & W. S. Rholes (Eds.), *Attachment theory and close relationships* (pp. 77–114). New York: Guilford Press.

Frijns, T., Finkenauer, C., Vermulst, A.A., & Engels, R.C.M.E. (2005). Keeping secrets from parents: Longitudinal associations of secrecy in adolescence. *Journal of Youth and Adolescence*, 34, 137-148.

Grotevant, H. D., & Cooper, C. R. (1986). Individuation in family relationships: A perspective on individual differences in the development of identity and role-taking skill in adolescence. *Human Development*, 29(2), 82-100.

Karavasilis, L., Doyle, A. B., & Markiewicz, D. (2003). Associations between parenting style and attachment to mother in middle childhood and adolescence. *International Journal of Behavioral Development, 27(2),* 153–164.

Keijsers, L., Branje, S. J. T., VanderValk, I. E., & Meeus, W. (2010). Reciprocal effects between parental solicitation, parental control, adolescent disclosure, and adolescent delinquency. *Journal of Research on Adolescence*, 20, 88–113.

Keijsers, L., Frijns, T., Branje, S. J. T., & Meeus, W. (2009). Developmental links of adolescent disclosure, parental solicitation, and control with delinquency: moderation by parental support. *Developmental psychology*, 45 (5), 1314.

Kerr, M., & Stattin, H. (2000). What parents know, how they know it, and several forms of adolescents' adjustment: Further evidence for a reinterpretation of monitoring. *Developmental Psychology*, 36, 366–380.

Kerr, M., & Stattin, H. (2003). Parenting of adolescents: Action or reaction? In A. C. Crouter & A. Booth (Eds.), *Children's influence on family dynamics: The neglected side of family relationships* (pp. 121–151). Mahwah, NJ: Lawrence Erlbaum.

Kerr, M., Stattin, H., & Burk, W. J. (2010). A reinterpretation of parental monitoring in longitudinal perspective. *Journal of Research on Adolescence*, 20, 39–64.

Kerr, M, Stattin, H, & Trost, K. (1999). To know you is to trust you: Parents' trust is rooted in child disclosure of information. *Journal of Adolescence*, 22:737–752.

Kiesner, J., Dishion, T. J., Poulin, F., & Pastore, M. (2009). Temporal dynamics linking aspects of parent monitoring with early adolescent antisocial behavior. *Soc. Dev.* 18,765–784.

Kiesner, J., Poulin, F., & Dishion, T. J. (2010). Adolescent Substance Use with Friends: Moderating and Mediating Effects of Parental Monitoring and Peer Activity Contexts. *Merrill Palmer* Q (Wayne State Univ Press), 56(4), pp. 529–556.

Klevens, J., & Hall, J. (2014). The importance of parental warmth, support, and control in preventing adolescent misbehavior. Journal of Child and Adolescent Behavior, 2, 121.

Kobak, R. R., Cole, H. E., Ferenz-Gillies, R., Fleming, W. S., & Gamble, W. (1993). Attachment and emotion regulation during mother-teen problem solving: A control theory analysis. *Child Development*, 64, 231–245.

Hayes, A. F. (2012), "*PROCESS: A Versatile Computational Tool for Observed Variable Mediation, Moderation, and Conditional Process Modeling*," white paper, The Ohio State University.

Hayes, L., Hudson, A., & Matthews, J. (2003). Parental monitoring: A process model of parent-adolescent interaction. *Behaviour Change*, 20, 13-24.

Hayes, L., Hudson, A., & Matthews, J. (2004). Parental monitoring behaviors: A model of rules, supervision and conflict. *Behavior Therapy*, 35, 587-604.

Ingram, J.R., Patchin, J.W., Huebner, B.M., McCluskey, J.D. & Bynum, T.S. (2007). Parents, friends, and serious delinquency: an examination of direct and indirect effects among at-risk early adolescents. *Criminal Justice Review*, 32(4), 380–400.

Jessor, R. (1998). New perspectives on adolescent risk behavior. In R. Jessor (Ed.), *New perspectives on adolescent risk behavior* (pp. 1–10). Cambridge, UK: Cambridge University Press.

Lacourse, E., Cote, S., Nagin, D.S., Vitaro, F., Brendgen, M., & Tremblay, R.E. (2002). A longitudinal-experimental approach to testing theories of antisocial behavior development. *Development & Psychopathology*, 14, pp. 909–924.

Laird, R. D., Criss, M. M., Pettit, G. S., Dodge, K. A., & Bates, J. E. (2008). Parents' monitoring knowledge attenuates the link between antisocial friends and adolescent delinquent behavior. *J. Abnorm. Child Psychol*. 36,299–310.

Laird, R. D., & Marrero, M. M. (2010). Information management and behavior problems: Is concealing misbehavior necessarily a sign of trouble? *Journal of Adolescence*, 33, 297–308.

Laird, R. D., Marrero, M. M., & Sentse, M. (2010a). Revisiting parental monitoring: Evidence that parental solicitation can be effective when needed most. *Journal of Youth and Adolescence*, 39, 1431–1441.

Laird, R. D., Marrero, M. M., & Sherwood, J. K. (2010b). Developmental and interactional antecedents of monitoring in early adolescence. In V. Guilamo-Ramos, J. Jaccard, & P. Dittos (Eds.), *Parental monitoring of adolescents: Current perspectives for researchers and practitioners* (pp. 39–66). New York: Columbia University Press.

Lansford, J. E., Rothenberg, W. A, Jensen, T. M., Lippold, M. A., Bacchini, D., Bornstein, …, & AlHassan, S. M. (2018). Bidirectional Relations Between Parenting and Behavior Problems From Age 8 to 13 in Nine Countries. In *Journal of Research on Adolescence*, 28(3), 571–590.

Larsen, R. J., & Buss, D. M. (2010). Personality Psychology: Domains of Knowledge about Human Nature (4th ed.). New York: McGraw-Hill.

Laursen, B., & Collins, W. A. (2009). Parent-child relationships during adolescence. In R. M. Lerner & L. Steinberg (Eds.), *Handbook of adolescent psychology: Contextual influences on adolescent development* (pp. 3-42). Hoboken, NJ, US: John Wiley & Sons Inc.

Leadbeater, B. J., Blatt, & S. J., Quinlan, D. M. (1995). Gender-linked vulnerabilities to depressive symptoms, stress, and problem behaviors in adolescents. *Journal of Research on Adolescence*, 5, pp.1–29.

Lessard, J. C., & Moretti, M. M. (1998). Suicidal ideation in an adolescent sample: Attachment patterns and clinical implications. *Journal of Adolescence*, 21, 383– 395.

Leve, L. D., Kim, H. K., & Pears, K. C. (2005). Childhood temperament and family environment as predictors of internalizing and externalizing trajectories from ages 5 to 17. *Journal of Abnormal Child Psychology*, 33 (5), pp. 505–520.

Lionetti, F., Keijsers, L., Dellagiulia, A., & Pastore, M. (2016). Evidence of Factorial Validity of Parental Knowledge, Control and Solicitation, and Adolescent Disclosure Scales: When the Ordered Nature of Likert Scales Matters.*Front.Psychol*.7:941.

Loeber, R., & Dishion, T. (1983). Early predictors of male delinquency: A review. *Psychological Bulletin*, 94, 68–99.

Miranda, M., Bacchini, D., & Affuso, G. (2011). Validazione di uno strumento per la misura del parental monitoring in un campione di adolescenti italiani. *Giornale di Psicologia dello Sviluppo*, 101,32–47. Moretti, M. M., Lessard, J. C., Scarfe, E., & Holland, R. (1999). Attachment and conduct disorder in adolescence: The importance of differentiating fearful from dismissing patterns. Unpublished manuscript, *Simon Fraser University*, Burnaby, British Columbia, Canada.

Moretti, M. M., McKay, S., & Holland, R. (2000). The Comprehensive Adolescent- Parent Attachment Inventory (CAPAI). Unpublished measure and data. *Simon Fraser University*, Burnaby, British Columbia, Canada.

Pettit, G. S., Laird, R. D., Dodge, K. A., Bates, J. E., & Criss, M. M. (2001). Antecedents and behavior-problem outcomes of parental monitoring and psychological control in early adolescence. *Child Development*, 72(2), 583-98.

Pettit, G. S., Keiley, M. K., Laird, R. D., Bates, J. E., & Dodge, K. A. (2007). Predicting the developmental course of mother-reported monitoring across childhood and adolescence from early proactive parenting, child temperament, and parents' worries. *J Fam Psychol*., 21(2):206-17.

Racz, S. J., & McMahon, R. J. (2011). The relationship between parental knowledge and monitoring and child and adolescent conduct problems: A 10-year update. *Clinical Child and Family Psychology Review, 14*, 377-398.

Rice, K. G. (1990). Attachment in adolescence: A narrative and meta-analytic review. *Journal of Youth and Adolescence*, 19, 511–538.

Scharf, M., Mayseless, O., & Kivenson-Baron, I. (2004). Adolescents' attachment representations and developmental tasks in emerging adulthood. *Developmental Psychology, 40(3),* 430–444.

Simpson, J. A., & Rholes, W. S. (2002). Fearful-avoidance, disorganization, and multiple working models: Some directions for future theory and research. *Attachment and Human Development*, 4(2), 223–229.

Smetana, J. G. (2008). "It's 10 o'clock: Do you know where your children are?" Recent advances in understanding parental monitoring and adolescents' information management. *Child Dev. Perspect.* 2,19–25.

Smetana, J.G., & Metzger, A. (2008). Don't ask, don't tell (your mom and dad): Disclosure and nondisclosure in adolescent-parent relationships. In M. Kerr, H. Stattin, & R.C.M.E. Engels (Eds.), *What can parents do? New insights into the role of parents in adolescents' problem behavior* (pp. 65-87). Chichester: John Wiley & Sons.

Smetana, J. G., Metzger, A., Gettman, D. C., & Campione-Barr, N. (2006). Disclosure and secrecy in adolescent-parent relationships. *Child Development*, 77, 201–217.

Soenens, B., Vansteenkiste, M., Luyckx, K., & Goossens, L. (2006). Parenting and adolescent problem behavior: An integrated model with adolescent self-disclosure and perceived parental knowledge as intervening variables. *Developmental Psychology*, 42, 305–318.

Stattin, H., & Kerr, M. (2000). Parental monitoring: A reinterpretation. *Child Development*, 71, pp. 1072– 1085.

Steinberg, L., (1990). Interdependence in the family: Autonomy, conflict, and harmony in the parent–adolescent relationship. In: Feldman, SS.; Elliott, GR., editors. *At the threshold: The developing adolescent.* Cambridge, MA: Harvard University Press, p. 255-276.

Tilton-Weaver, L., Kerr, M., Pakalniskeine, V., Tokic, A., Salihovic, S., & Stattin, H. (2010). Open up or close down: How do parental reactions affect youth information management? *Journal of Adolescence*, 33, 333-346.

Tilton-Weaver, L.C., & Marshall, S.K. (2008). Adolescents' agency in information management. In M. Kerr, H. Stattin, & R.C.M.E. Engels (Eds.), *What can parents do? New insights into the role of parents in adolescent problem behavior* (pp. 11-41). Chichester: John Wiley & Sons.

Tolan, P. H., Dodge, K., & Rutter, M. (2013). "Tracking the multiple pathways of parent and family influence on disruptive behavior disorders," in Disruptive Behavior Disorders, eds P. H. Tolan and B. L. Leventhal (New York, NY: Springer),161–191.

Tremblay, R.E. (2000). The development of aggressive behaviour during childhood: What have we learned in the past century? *International Journal of Behavioral Development*, 24, pp.129–141.

Vieno, A., Nation, M., Pastore, M., & Santinello, M. (2009). Parenting and antisocial behavior: A model of the relationship between adolescent self-disclosure, parental closeness, parental control, and adolescent antisocial behavior. *Developmental Psychology*.

Welch, R.D., & Houser, M.E. (2010). Extending the four-category model of adult attachment: An interpersonal model of friendship attachment. *Journal of Social and Personal Relationships*, 27, 351-366.

Willoughby, T., & Hamza, C. A. (2010). A Longitudinal Examination of the Bidirectional Associations Among Perceived Parenting Behaviors, Adolescent Disclosure and Problem Behavior Across the High School Years. *Journal of Youth and Adolescence*, 40 (4), pp 463–478.

Wolff, J. C., & Ollendick, T. H. (2006). The comorbidity of conduct problems and depression in childhood and adolescence. *Clinical Child and Family Psychology Review*, 9 (3/4), pp. 201-220.

Zahn-Waxler, C., Klimes-Dougan, B., & Slattery, M. J. (2000). Internalizing problems of childhood and adolescence: Prospects, pitfalls, and progress in understanding the development of anxiety and depression. *Development & Psychopathology*, 12, pp. 443–466.

CHAPTER 4

"AGREEMENT AND DISAGREEMENT AMONG EARLY ADOLESCENTS AND PARENTS: A MULTI-INFORMANT STUDY"

Chapter Plan: The previous chapter (Chapter 3) provided some new results about behavioral problems as predicted by parental monitoring and attachment in early adolescents. The present chapter (Chapter 4) focuses on a multi informant approach.

The study main aim is to explore agreement and disagreement among preadolescents' and parents' ratings in relation to behavioral problems, attachment and parental monitoring. A part will be dedicated also to teachers' ratings of behavioral problems.

4.1 Introduction

4.1.1 Multi informant agreement

Over the past 50 years, research examining the extent of congruence between parents' and children's reports about parents' behaviors has yielded inconsistent findings, likely due to heterogeneity in the psychological constructs, methods, and sample characteristics (De Los Reyes, 2011). Achenbach et al. (1987) conducted the first meta-analysis of parent–child agreement (indexed by Pearson correlations) about children's emotional and behavior problems as reported in 119 studies that included a range of questionnaires about children's mental health. Then, in a meta-analysis of 341 studies, De Los Reyes et al. (2015) replicated the finding of low-to-moderate parent–child correspondence about children's mental health symptoms and the extent of agreement was, again, moderated by type of problems being rated.

Modest agreement is the norm for different informants' ratings of a given child's functioning (Achenbach, 1991a; Achenbach, McCounghy & Howell, 1987; Biedrman et al, 1993; Youngstrom et al., 2000), raising concerns about the relative validity of any single source of information and creating measurement obstacles for both research and clinical endeavors.

Mental health professionals have distinct opinions about the relative value of different informants for behavioral criteria. Clinicians and researchers generally perceive youth self-report as the least useful source of behavior ratings pertaining to hyperactivity, inattention and oppositional behaviors; whereas both youth and caregivers are preferred to teachers as sources of information about behavioral problems (Loeber, Green & Lahey, 1990; Loeber, Green, Lahey, & Stouthamer-Loeber, 1991). However, relatively little is known about the extent to which agreement varies across disorders or syndromes or to which it is a function of informant psychopathology.

Several methodological issues have complicated the evaluation of cross-informant agreement. Most studies addressing this topic are unclear about the extent to which different

informants might report higher levels of behavior problems. Teachers, parents, youths and clinicians often use different rating scales, assessing overlapping but nonidentical sets of behaviors and often varying in the frame of reference (Richters, 1992). Even when similar instruments are used, the common practice of norming scores on the basis of distributions observed in a standardization sample may mask significant differences in the number of behavior problems reported by various informants. For example, on the basis of the norms reported in the respective manuals for the different versions of the Child Behavior Checklist (CBCL; Achenbach, 1991a), nonreferred males ages 12-18 reported an average raw score of 4.7 on the Attention Problems scale (Achenbach, 1991d). Parents reported an average raw score of 3.4 (Achenbach, 1991b), and teachers reported an average of 9.0 for comparable samples of male youths (Achenbach, 1991c). Each of these raw scores would be assigned a comparable 7 score of close to 50, reflecting that the level of behavior problems was comparable to the observed average in each sample. These 7 scores thus mask the fact that a child showing average levels of attention problems according to a teacher actually may display three times as many behavior problems as would be endorsed by a parent.

The substantially larger number of attentional problems reported by teachers compared with parents and youths, for example, suggests that reliance on teacher report while using the same diagnostic threshold (e.g., six or more symptoms of inattention or hyperactivity in the last 6 months; American Psychiatric Association, 1994) would result in greater sensitivity and lower specificity in referrals and diagnoses of attention deficit hyperactivity disorder. Besides clouding clinical decision making, this issue has implications for epidemiological research (Bird, Gould, & Staghezza, 1992; Verhulst & Van der Ende, 1992), in as much as reliance on different informants can result in vastly different estimates of prevalence (Sawyer et al., 1992).

Another shortcoming of the extant literature is a general failure to examine agreement about symptoms and profiles of behaviors, either at the level of subscales or item responses. Past investigations generally have not evaluated dyadic agreement per se, especially involving

comparisons between children's self-reported behavior ratings versus similar information provided by parents or teachers on the same behaviors (cf. Briggs-Gowan, Carter, & Schwab-Stone, 1996; Frick, Silverthorn, & Evans, 1994; Tarullo, Richardson, Radke-Yarrow, & Martinez, 1995; for examples with structured interviews). One notable exception is the cross-informant scoring software developed by Achenbach, which presents q correlations between pairs of informants across the total set of behavior problems evaluated. Achenbach (1991a) observed a broad range of agreement within a large set of parent-teacher dyads, with some pairs agreeing almost perfectly and others systematically reporting opposite concerns. Comparing youth self-report with the descriptions from other informants probably would reveal similar diversity of opinions about symptom profiles.

There is also reason to believe that adolescents' presentation of behavior problems varies across different settings such as the home or school (Kazdin & Kagan, 1994; Kolko & Kazdin, 1993). Additionally, cross-informant agreement may vary considerably depending on items content: teachers may be more sensitive to disruptive behavior and parents more to depression or anxiety (Abikoff et al. 1993). On the other hand, teachers are more likely to agree with other teachers about depressive symptoms or overall levels of depressive or aggressive behaviors (Epkins, 1995) suggesting that there may be more cross-situational continuity in these behaviors. Teacher reports also may be more specific for these symptoms versus disruptive or attentional problems, in as much as teachers appear less likely to overreport internalizing versus disruptive problem behaviors (Abikoff et al., 1993). Another view is that agreement should be greater about externalizing behaviors, whereas internalizing behaviors might be more difficult to observe and less disruptive to family or classroom functioning and therefore less likely to attract the attention of adult informants (Achenbach et al., 1987; Kolko & Kazdin, 1993).

An alternative view is that some informants may show a systematic tendencyto report more negative events and behaviors. Furthermore, recent research shows a specific pattern of interaction between mothers' basic temperament traits (negative affectivity and effortful control)

and genetic markers in their assessment of children's emotional and behavioral problems. (Ozturk et al., 2018). In particular, dopamine D4 receptor gene and children's age at adoption are two moderators in the association in which mothers' temperament was affecting their evaluation of their children's emotional and behavioral problems.

Issues of response set, social desirability, and willingness to report negative criteria are well-documented concerns in psychological assessment (Lanyon & Goodstein, 1997). The greatest amount of attention in the literature has concentrated on caregiver depression as a potential source of bias (e.g., Briggs-Gowan et al., 1996; Chilcoat & Breslau, 1997; Fergusson, Lynskey, & Horwood, 1993). Mood-congruent biases in recall (Haaga, Dyck, & Ernst, 1991; Mogg, Bradley, Millar, & White, 1995) are a possible mechanism for this bias. Biases in appraisal also may contribute: Increased negative affect correlates with overestimates of negative emotions and behaviors but with more accurate perceptions of positive emotions when adults rated videotapes of child behavior during a frustrating task (Youngstrom, Izard, & Ackerman, 1999).

Research suggests that other aspects of informants' psychological functioning might influence interrater agreement. Increased parental or familial stress is associated with decreased levels of agreement between the parent and other informants about child pathology (Kolko & Kazdin, 1993). There has been speculation that the bias widely attributed to depression may actually be a more general phenomenon, linked broadly to pathology in the caregiver (Chilcoat & Breslau, 1997; Richters, 1992). Some results suggest that parents with anxiety disorders also show significant tendencies to report greater levels of pathology in their children than do independent observers (Frick et al., 1994). However, most previous work has not directly explored the potential effect of nonaffective parental pathology, such as substance abuse or anti-social behavior, on parent report or interrater agreement (cf. Chilcoat & Breslau, 1997).

4.1.2 Multi informant disagreement

During adolescence, family relationships undergo important changes that are often characterized by increases in intergenerational conflict or disagreements between parents and children. Such changes in the interaction between family members are thought to be a result of young people beginning to seek autonomy, which is driven by the desire to establish an independent identity (Phinney, Kim-Jo, Osorio, & Vilhjalmsdottir, 2005). Disagreements among informants' reports (hereafter referred to as "informant discrepancies") are some of the most consistent effects observed in the psychological sciences (Barrett, 2006; De Los Reyes et al. 2009). Further, prior work has long attested to observing high levels of informant discrepancies between parent and adolescent reports of the adolescent's behavior (Achenbach et al. 1987; Ferdinand et al. 2004; Youngstrom et al. 2003). However, these informant discrepancies have also been observed for parent and adolescent reports of the parent's behavior and aspects of the parent-adolescent relationship (De Los Reyes et al. 2008; Guion et al. 2009).

Much of the literature on parent–child disagreement focuses on how family, child, parent, and relationship problems predict discrepancies (Achenbach et al. 1987; De Los Reyes & Kazdin, 2006). However, a growing body of literature has begun to examine the opposite question – the impact of informant disagreements themselves on youth adjustment (e.g., Guion et al. 2009; Mounts, 2007).

Previous research has indicated that increases in intergenerational conflict can affect the perceptions of the quality of family relationships and parenting(Ohannessian, Lerner, Lerner, & von Eye, 1995; Ohannessian et al., 2000; Rask, Astedt-Kurk, Paavilainen, & Laippala, 2003). In fact, research shows that adolescents tend to view the family more negatively and to overestimate the number of major differences between themselves and their parents, whereas parents tend to underestimate the number of differences (Smetana, 1989; Steinberg, 1990). Although discrepant

reports are abundant in research on child psychology, these have traditionally been treated as methodological artifacts (Achenbach, 2011; De Los Reyes & Kazdin, 2004). Recently, however, researchers have suggested that because all informants provide valid perspectives on behavior, these disagreements are important in their own right (De Los Reyes, Henry, Tolan, & Wakschlag, 2009). Furthermore, the extent and direction of the difference in reports may be an indicator of relationship quality between the informants (De Los Reyes & Kazdin, 2006).

In the context of parent– child relationships, where the informants have extended contact and knowledge of one another, discrepancies may explain child outcomes over and above the influence of self or parent reports of family dynamics (De Los Reyes, 2011; Reynolds, MacPherson, Matusiewicz, Schreiber, & Lejuez, 2011) and may be meaningful, internally consistent, and stable over time (De Los Reyes, 2011). Significant parent–child disagreements are common even when parallel measures are used, and when the individual reports are reliable and valid (Laird & De Los Reyes, 2013). Differing perceptions may reflect difficulties in the parent–child relationship such as conflict or communication problems (Guion et al., 2009) and tend to be associated with negative outcomes in children, such as internalizing and externalizing symptoms (De Los Reyes et al., 2008; Guion et al., 2009). Interestingly, sometimes divergent parent–child perceptions may reflect an adolescent's healthy increase in autonomy and separation from the family unit (Carlson et al., 1991; McCauley & Ohannessian, 2000). Although informant discrepancies have often been interpreted as measurement error or evidence of informant biases, recent work in the adolescent development literature suggests that they may predict important child outcomes over time (Beck et al. 2006; Guion et al. 2009).

Empirical studies reveal that conclusions based on parents' reports are quite different from those derived from children's reports on parallel measures (De Los Reyes, 2013). Therefore, it is important to not only acknowledge the presence of parent–child incongruence, but also to explore the reasons for it, what it signifies, and how best to deal with it when encountered (De Los Reyes, 2013). The phenomenon of discrepancies in ratings of family functioning between parent and

adolescent dyads is an essential area of research to explore, particularly if discrepancies reflect underlying problems in family functioning (e.g., monitoring, attachment), which are critical for developmental outcomes. Informant discrepancies are particularly important to understand in reference to assessments of a key construct in the developmental literature: parental monitoring of child whereabouts and behaviors. Parental monitoring is a multidimensional construct representing what a parent knows about their child's everyday whereabouts (Parental Knowledge), how they gain access to information about their whereabouts (Parental Solicitation), and what information the child willingly discloses to their parents about their whereabouts (Child Disclosure) (Kerr and Stattin, 2000). Parental monitoring is thought to comprise both child-driven and parent-driven processes, with parent and child actively contributing to expressions of these behaviors (De Los Reyes et al., 2010).

4.1.3 The impact of gender on adolescent–parent disagreement

Disagreements between adolescents and parents have been found to vary by the gender of the adolescent, although the nature of differences often depends on the topic of contention (Bell et al., 2001). Recent studies indicate that the adolescent's gender may also have an important influence on the relationship between adolescent–parent discrepancies in perceptions of family functioning and adolescent. For example, Ohannessian et al. (1995) found that discrepancies in perceptions of family functioning were related to higher levels of anxiety and depression for girls, but not for boys. Similarly, Carlson et al. (1991) found that discrepancies in family conflict were related to lower levels of adolescent self-esteem and self-competence for female adolescents.

In explaining gender differences in discrepancies, Shek (1998) refers to gender socialization theories, which suggest that sons are socialized to focus on separateness, whereas daughters are socialized to define themselves in terms of closeness and connection to others. Therefore, when discrepancies exist in parent–adolescent relationships, this can tend to have a more negative

impact on girls. Also, because girls are more susceptible to the influence of family emotional climate than adolescent boys (Eisenberg et al., 1992), they are more likely to have accurate representations of family dynamics, meaning they are likely to have lower levels of discrepancies than boys.

4.2 Objectives

The main goal of the current study was to determine overall effect sizes for mother-child, father- child and mother-father agreement (i.e., correlations) and which informant reported more problems (i.e., difference score), comparing the correlation coefficients of parents and adolescents among groups of different gender (Fisher's z-Test) on each of the two scales measured by the CBCL and YSR: Externalizing and Internalizing Problems.

Then, a second aim was to examine potential moderators (adolescents' gender and insecure attachment) of the degree of parent–child congruence in perceived behavioral problems. Moderators were chosen based on their use in prior study (Chapter 3).

Were tested the following specific hypothesis:

1. In community samples children and adolescents tend to report more symptoms about themselves than their parents and teachers report about them (Rescorla et al., 2013; De Los Reyes et al., 2015).
2. Whereas parents and teachers tend to be in higher agreement with each other than with the youths (Goodman et al., 2011; McLeod et al., 2007), teachers tend to report fewer problems than parents (Gregory & Ripski, 2008).
3. We also expected to find gender-related differences concerning internalizing and externalizing problems, monitoring and attachment from all informants.
4. Adolescent disclosure, parental solicitation and parental control (perceived by mothers and

fathers) and gender may moderate the effects of adolescent disclosure, parental solicitation and parental control (perceived by adolescents) on internalizing and externalizing problems, after controlling respectively attachment anxiety and avoidance.

4.3 Method

4.3.1 Sample

Adolescents were recruited from 12 secondary schools in the city and province of Pavia (Italy). 325 preadolescents answered the questionnaires. The mean age of adolescents' was 13.2 (*SD*= 0.5; range = 12-16 years), 44% were male *(M age = 13.26, SD= 0.6; range = 12-16 years)* and 56% female *(M age = 13.13, SD= 0.4; range = 12-15 years).*

For a detailed description of the whole sample, see Chapter 2, Paragraph 2.2.1, p. and Table 1 (*Descriptive statistics of adolescents, families and parent*)

4.3.2 Measures

For a detailed description of the procedure, see Chapter 2, Paragraph 2.2.3, p. 10.

4.3.3 Procedure

For a detailed description of the procedure, see Chapter 2, Paragraph 2.2.2, p. 14.

Indices of Agreement

The present study evaluated interrater agreement between the different dyads (mother-adolescent, father-adolescent, mother-father and teacher with each parent) with several metrics of agreement. In addition to looking at interrater correlations (r), the present analyses explored differences in the level of raw scores as well as q correlations and Fisher's z-Test measures to capture agreement about the profile of internalizing or externalizing symptoms reported by each

informant.

The q correlations are simply the Pearson correlations between the sets of items provided by two different informants. The q correlations are not sensitive to differences in the level of problems reported by the different informants, but they do capture information about the shape and dispersion of the profile of item scores (Waller & Meehl, 1998).

Fisher's z-Test was used to compare the correlation coefficients of parents and adolescents among groups of different gender.

A third index of agreement, the difference score, was computed by subtracting the raw scores of mother and father from the youth self-reported raw score and the mother score from the father score, for respective each scale. This created three difference score for each index adolescent: CBCL (mother)-YSR, CBCL (father)-YSR, CBCL (mother)-CBCL (father). Difference scores of zero meant that the rater dyad agree exactly about the amount of that behavior problem being shown by the index adolescent. Difference scores were the only metric that indicated which informant reported more problems: positive numbers indicated that the adult (or mother vs. father) reported more problems then did the youth, and negative numbers signified the opposite. Difference score are sensitive to the level but not to the shape or dispersion of profiles. Two informants could agree about the overall level of problems without necessarily agreeing about any of the constituent symptoms. In this regard, difference scores and q correlations are mirror images of each other: difference scores capture the extent to which the dyad agreed about the overall level of problems (and indicate who reported more concerns), but it is possible for the two informants to identify different specific concerns despite arriving at the same overall score.

4.3.4 Analytic plan

Analyses proceeded in the following manner:

1. First, we used Pearson correlation coefficients between mothers, fathers and adolescents'

ratings and Fisher's z-Test to compare the correlation coefficients of parents and adolescents among groups of different gender.

2. The second step was to calculate the difference score for understanding which informant reported more problems (mother-adolescent, father-adolescent, mother-father);
3. Finally, in order to inquire the association between variables and informants, moderation analysis was performed using PROCESS (Hayes, 2012).

4.4 Results

4.4.1 **Interrater Agreement CBCL mother, CBCL father, TRF and YSR**

Table 9 shows the Pearson correlation coefficients between parents, teachers and adolescents' ratings and Table 10 shows the Pearson correlation coefficients in the sample divided for gender.

Table 9. Pearson correlation coefficients between parents, teachers and adolescents' ratings (CBCL, TRF, YSR total score)

	Teacher	Adolescent	Mother	Father
Teacher	-	.03	**.22****	**.26****
Adolescent	.03	-	.09	.09
Mother	.22**	.09	-	**.65****
Father	.23**	.09	.65**	-

Note. *p < .05; **p < .01; ***p < .001

Table 10. Pearson correlation coefficients divided by gender

	Girls			
	Teacher	Adolescent	Mother	Father
Teacher	-	.06	.16	.12
Adolescent	.11	-	.1	.19
Mother	**.34****	**.34****	-	**.68****
Father	**.35****	**.2****	**.61****	-
	Boys			

Note. *p < .05; **p < .01; ***p < .001

As shown in Table 10, mothers and fathers of girls (r = .68, p = .00) and boys (r = .61, p = .00) agreed on total problems. Boys were in agreement with their mothers (r = .34, p = .00) and their fathers (r = .2, p = .04). Furthermore, teachers were in agreement with the mothers (r = .34, p = .001) and fathers of boys (r = .35, p = .001). As shown in the Table 10, the extent of the agreements is not high, especially between father and teen.

The Fisher z test was used to compare the correlation coefficients of parents-teachers, parents-adolescents and teacher-adolescents among groups of different gender (boys vs girls). Sex differences in correlations were found. Teachers and fathers had significantly higher agreement when they were rating boys (r =.35 for boys vs r =.12 for girls, z = 1.71; p = .04). Adolescents and mothers had significantly higher agreement for girls (r =.37 for girls vs r =.10 for boys, z = 1.87; p= .03).

Externalizing Problems

Table 11 and 12 show the Pearson correlation coefficients between parents, teachers and adolescents' ratings in the sample divided for gender. In particular, Table 11 shows externalizing problems and Table 12 shows internalizing problems, both divided by gender.

Table 11. CBCL, TRF, YSR externalizing score separated by gender

	Girls			
	Teacher	Adolescent	Mother	Father
Teacher	-	.11	**.19***	.11
Adolescent	.11	-	**.4****	**.26****
Mother	**.23***	**.32****	-	**.67****
Father	**.26***	.17	**.58****	-
	Boys			

Note. *p < .05; **p < .01; ***p < .001

As shown in Table 11, mothers and fathers of girls (r = .67, p = .00) and boys (r = .59, p = .00) were agree for externalizing problems. Boys were in agreement with their mothers (r =.32, p = .00) as girls (r = .4, p = .00). Furthermore, teachers were in agreement with the mothers (r= .23, p = .001) and fathers of boys (r = .25, p = .001) and with girls' mothers (r = .19, p = .001).

The Fisher z test was used to compare the correlation coefficients of parents-teachers, parents-adolescents and teacher-adolescents about externalizing problems among groups of different gender (boys vs girls). No significant results were found.

Internalizing Problems

Table 12. CBCL, TRF, YSR internalizing separated by gender

	Girls			
	Teacher	Adolescent	Mother	Father
Teacher	-	**.28****	**.23****	**.2****
Adolescent	**.22***	-	**.54****	**.391****
Mother	**.44****	**.43****	-	**.721****
Father	**.38****	**.25***	**.68****	-
	Boys			

Note. *p < .05; **p < .01; ***p < .001

As shown in Table 12, mothers and fathers of girls (r = .72, p = .00) and boys (r = .68, p = .00) were highly in agreement for internalizing problems. Boys were agreed with their mothers (r = .43, p = .00) and with their fathers (r = .25, p = .01). Girls were agreed with their mothers (r = .54, p = .00) and with their fathers (r = .39, p = .01). Furthermore, teachers were agreed with the mothers (r = .44, p = .001) and fathers of boys (r = .39, p = .001) and with girls' mothers (r = .23, p = .001) and with girls' fathers (r = .2, p = .001).

The Fisher z test was used to compare the correlation coefficients of parents-teachers, parents-adolescents and teacher-adolescents about internalizing problems among groups of different gender (boys vs girls). Teachers and mothers had significantly higher agreement when they were rating boys (r =.44 for boys vs r =.23 for girls, z = 1.68; p = .04).

Concerning somatic complaints, mothers and fathers had significantly higher agreement when they were rating girls (r =.51 for boys vs r =.75 for girls, z = -2.87; p = .00). Also, adolescents and mothers had significantly higher agreement for girls than for boys (r =.38 for boys vs r =.56 for girls, z = -1.68; p= .04).

4.4.2 **Interrater Agreement Behavioral Control Scale**

Table 13 shows the Pearson correlation coefficients between parents and adolescents' ratings and Table 14 shows the Pearson correlation coefficients in the sample divided for gender.

Table 13. Pearson correlation coefficients between parents and adolescents' ratings

	Adolescent	Mother	Father
Adolescent	-	**.35****	.08
Mother	**.35****	-	**.25****
Father	.08	**.25****	-

Note. *p < .05; **p < .01; ***p < .001

Table 14. Pearson correlation coefficients divided by gender

	Girls		
	Adolescent	Mother	Father
Adolescent	-	**.45****	.14
Mother	**.26****	-	**.36****
Father	.03	.14	-
	Boys		

Note. *p < .05; **p < .01; ***p < .001

As shown in Table 13, mothers and fathers of girls (r = .36, p = .00) were in agreement for total problems. Boys were agreed with their mothers (r = .26, p = .00) as girls with theirs mothers (r = .45, p = .04).

The Fisher z test was used to compare the correlation coefficients of mothers-adolescents, fathers-adolescents and mothers-fathers among groups of different gender (boys vs girls). Adolescents and mothers had significantly higher agreement when they were rating girls (r =.26 for boys vs r =.45 for girls, z = -1.59; p = .05). Furthermore, fathers and mothers had significantly higher agreement for girls (r =.14 for boys vs r =.36 for girls, z = -1.66; p= .04).

Adolescent Disclosure

Table 15 shows the Pearson correlation coefficients between parents and adolescents' ratings and Table 16 shows the Pearson correlation coefficients in the sample divided for gender.

Table 15. Pearson correlation coefficients between parents and adolescents' ratings for monitoring adolescent disclosure score

	Adolescent	Mother	Father
Adolescent	-	**.38****	**.39****
Mother	**.38****	-	**.64****
Father	**.39****	**.64****	-

Note. *p < .05; **p < .01; ***p < .001

Table 16. Pearson correlation coefficients between parents and adolescents' ratings for monitoring adolescent disclosure score separated by gender

	Girls		
	Adolescent	Mother	Father
Adolescent	-	**.49****	**.47****
Mother	**.26****	-	**.66****
Father	**.31****	**.6****	-
	Boys		

Note. *p < .05; **p < .01; ***p < .001

As shown in Table 16, mothers and fathers of girls (r = .66, p = .00) and boys (r = .6, p = .00) were in agreement for adolescent disclosure scale. Boys were agreed with their mothers (r = .26, p = .00) and fathers (r = .31, p = .00) as girls with theirs mothers (r = .49, p = .04) and fathers (r = .47, p = .00).

The Fisher z test was used to compare the correlation coefficients of mothers-adolescents, fathers-adolescents and mothers-fathers among groups of different gender (boys vs girls). Adolescents and mothers had significantly higher agreement when they were rating girls (r =.26 for boys vs r =.49 for girls, z = -2.02; p = .02).

Parental Solicitation

Table 17 shows the Pearson correlation coefficients between parents and adolescents' ratings and Table 18 shows the Pearson correlation coefficients in the sample divided for gender.

Table 17. Pearson correlation coefficients between parents and adolescents' ratings in monitoring parental solicitation score

	Adolescent	Mother	Father
Adolescent	-	**.22****	**.12****
Mother	**.23****	-	**.32****
Father	**.12****	**.32****	-

Note. *p < .05; **p < .01; ***p < .001

Table 18. Pearson correlation coefficients in monitoring parental solicitation score separated by gender

Girls			
	Adolescent	Mother	Father
Adolescent	-	**.31****	**.26****
Mother	.10	-	**.4****
Father	.15	**.21***	-
	Boys		

Note. *p < .05; **p < .01; ***p < .001

As shown in Table 18, mothers and fathers of girls (r = .4, p = .00) and boys (r = .21, p = .04) were agree for parental solicitation scale. Girls were agreed with their mothers (r = .31, p= .00) and fathers (r = .26, p = .01).

The Fisher z test was used to compare the correlation coefficients of mothers-adolescents, fathers-adolescents and mothers-fathers among groups of different gender (boys vs girls). Adolescents and mothers had significantly higher agreement when they were rating girls (r =.1 for boys vs r =.31 for girls, z = -1.64; p = .05).

Parental Control

Table 19 shows the Pearson correlation coefficients between parents and adolescents' ratings and Table 20 shows the Pearson correlation coefficients in the sample divided for gender.

Table 19. Pearson correlation coefficients between parents and adolescents' ratings in monitoring parental control score

	Adolescent	Mother	Father
Adolescent	-	**.43****	**.34****
Mother	**.43****	-	**.43****
Father	**.34****	**.43****	-

Note. *p < .05; **p < .01; ***p < .001

Table 20. Pearson correlation coefficients in monitoring parental control score separated by gender

	Girls		
	Adolescent	Mother	Father
Adolescent	-	**.45****	**.24****
Mother	**.38****	-	**.48****
Father	**.21****	**.38****	-
	Boys		

Note. *p < .05; **p < .01; ***p < .001

As shown in Table 20, mothers and fathers of girls (r = .45, p = .00) and boys (r = .38, p = .00) were in agreement for parental control scale. Girls were in agreement with their mothers (r = .45, p = .00) and fathers (r = 1.00, p = .00), as boys with their mothers (r = .37, p = .00) and fathers (r = 1.00, p = .00).

The Fisher z test was used to compare the correlation coefficients of mothers-adolescents, fathers-adolescents and mothers-fathers among groups of different gender (boys vs girls). No significant results were found.

4.4.3 **Interrater APAI**

Table 21 shows the Pearson correlation coefficients between parents and adolescents' ratings and Table 22 shows the Pearson correlation coefficients in the sample divided for gender.

Table 21. Pearson correlation coefficients between parents and adolescents' ratings in the APAI total score

	Adolescent	Mother	Father
Adolescent	-	**.16***	.06
Mother	**.16***	-	.12
Father	.06	.12	-

Note. *p < .05; **p < .01; ***p < .001

Table 22. Pearson correlation coefficients in the APAI total score separated by gender

	Girls		
	Adolescent	Mother	Father
Adolescent	-	**.20***	.1
Mother	.12	-	.01
Father	.00	**.23***	-
	Boys		

Note. *p < .05; **p < .01; ***p < .001

As shown in Table 21, mothers and fathers of boys (r = .23, p = .02) were agree in agreement for total score. Girls were in agreement with their mothers (r = .20, p = .02).

The Fisher z test was used to compare the correlation coefficients of mothers-adolescents, fathers-adolescents and mothers-fathers among groups of different gender (boys vs girls). Fathers and mothers had significantly higher agreement for boys (r =.23 for boys vs r =.01 for girls, z = -1.59; p= .05).

Attachment Anxiety

Table 23. Pearson correlation coefficients between parents and adolescents' ratings in the APAI anxiety score

	Adolescent	Mother	Father
Adolescent	-	**.22****	**.20****
Mother	**.22****	-	**.52****
Father	**.20****	**.52****	-

Note. *p < .05; **p < .01; ***p < .001

Table 24. Pearson correlation coefficients between parents and adolescents' ratings in the APAI anxiety score separated by gender

	Girls		
	Adolescent	Mother	Father
Adolescent	-	**.23***	**.23***
Mother	**.20***	-	**.50****
Father	**.21***	**.54****	-
	Boys		

Note. *p < .05; **p < .01; ***p < .001

As shown in Table 24, mothers and fathers of girls (r = .5, p = .00) and boys (r = .54, p = .00) were in agreement for anxiety scale. Girls were in agreement with their mothers (r = .23, p = .00) and fathers (r = .23, p = .00), and boys with their mothers (r = .2, p = .00) and fathers (r = .2, p = .00).

The Fisher z test was used to compare the correlation coefficients of mothers-adolescents, fathers-adolescents and mothers-fathers among groups of different gender (boys vs girls). No significant results were found.

Attachment Avoidance

Table 25. Pearson correlation coefficients between parents and adolescents' ratings in the APAI avoidance score

	Adolescent	Mother	Father
Adolescent	-	**.20****	**-.19****
Mother	**.20****	-	**-.43****
Father	**-.19****	**-.43****	-

Note. *p < .05; **p < .01; ***p < .001

Table 26. Pearson correlation coefficients between parents and adolescents' ratings in the APAI avoidance score separated by gender

	Girls		
	Adolescent	Mother	Father
Adolescent	-	**.22***	**-.19***
Mother	.17	-	**-.56****
Father	**-.20***	**-.25***	-
	Boys		

Note. *p < .05; **p < .01; ***p < .001

As shown in Table 26, mothers and fathers of boys (r = -.25, p = .01) and girls (r = -.56, p = .00) were in disagreement for avoidance scale. Girls were in agreement with their mothers (r = .22, p = .01) and in disagreement their fathers (r = -.19, p = .04). Boys were in disagreement with their fathers (r = -.2, p = .04).

The Fisher z test was used to compare the correlation coefficients of mothers-adolescents, fathers-adolescents and mothers-fathers among groups of different gender (boys vs girls). Fathers and mothers had significantly higher disagreement for girls (r = -.25 for boys vs r = -.56 for girls, z = -2.72; p= .00).

4.4.4 **Difference score for CBCL, YSR and TRF**

Table 27. Difference scores reported for all informants on behavioral problems (internalizing and externalizing)

		1 (%)	2 (%)	3 (%)
M-A	Internalizing	13,9	80,9	5,2
	Externalizing	10	86,6	3,5
F-A	Internalizing	14,5	82,3	3,2
	Externalizing	10,4	86,4	3,2
T-A	Internalizing	9	89,6	1,5
	Externalizing	4,1	93,3	2,6
M-F	Internalizing	57,5	28,3	14,2
	Externalizing	40,6	27,4	32,1
M-T	Internalizing	76,1	21,1	2,9
	Externalizing	70,3	14,8	14,8
F-T	Internalizing	64,1	31,3	4,5
	Externalizing	61,1	20,7	18,2

Note. M=Mother, F=Father, A=Adolescent, T= Teacher. Difference scores are reported in %. 1= the first informant reported more problems; 2= the second informant reported more problems; 3= both informants reported same problems.

As shown in the table, adolescents always report more problems, both internalizing and externalizing, than parents and teachers. Instead, in the comparison between mother and father, mothers are those who see the problems of their children most.

Finally, teachers see fewer problems than all informants. This result must however be interpreted also considering the small number of teachers who participated in the research

compared to that of the parents.

4.4.5 **Moderation models**

Moderation analyzes were conducted following the models in Chapter 3 (page 17). Since the study is a multi-informant one, it has been added as a moderator a variable reported from the mother or the father, leaving as predictor and outcome variables seen by preadolescent (see model 1 and 2 presented below). Among all the models investigated (with monitoring scales as predictors and emotional behavioral problems as outcomes, reported by adolescents and as moderators monitoring scales reported by both parents and gender) only two had significant results and will be reported below.

Hypothesis 4

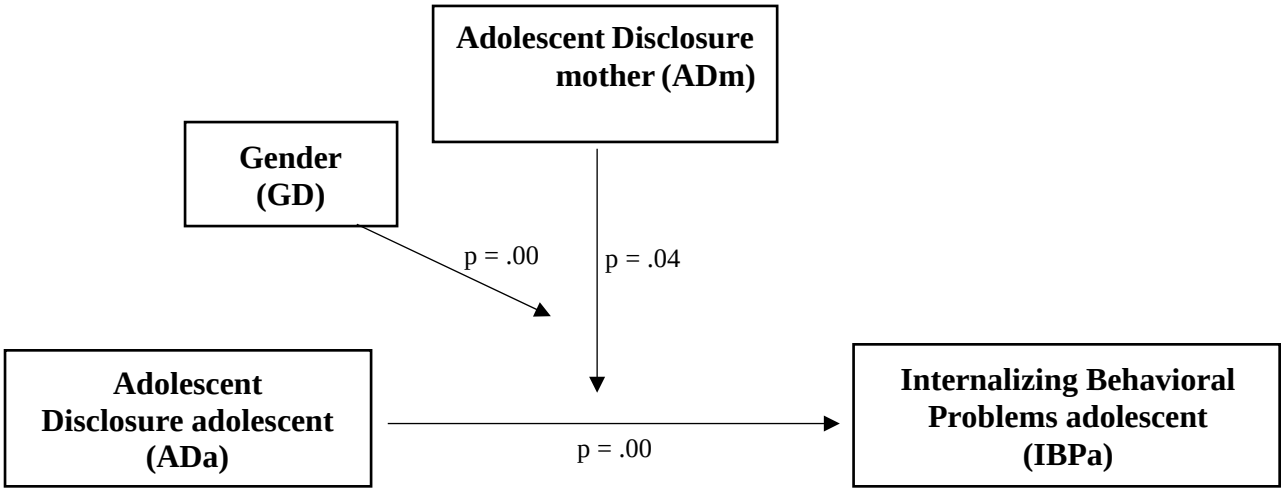


Figure 16. A conceptual diagram of the Moderation Model 3

Then, we tested whether Adolescent Disclosure adolescent (ADa) could predict preadolescents' Internalizing Behavioral Problems adolescent (IBPa) with the moderation effect

of Adolescent Disclosure mother (ADm) and Gender (GD). ADa was considered as independent variable and preadolescents' IBPa was the dependent variable. ADm and GD were entered as moderators into the model and AAn of adolescents as covariate.

Overall the model (R^2 = .28, F(8, 218) = 10.63, p = .001) and the interaction with GD and ADm as moderators was significant. This result suggests that ADa influences IBPa in preadolescence, only if preadolescents are females and the ADm is low or medium (β = 4.61, t = 2.89, p = .001). Specifically, the model affirms that female preadolescents with a low and medium level of adolescent disclosure perceived by mothers and that voluntary and spontaneously revealed to their parents about friends and/or activities attended experienced less Internalizing Behavioral Problems.

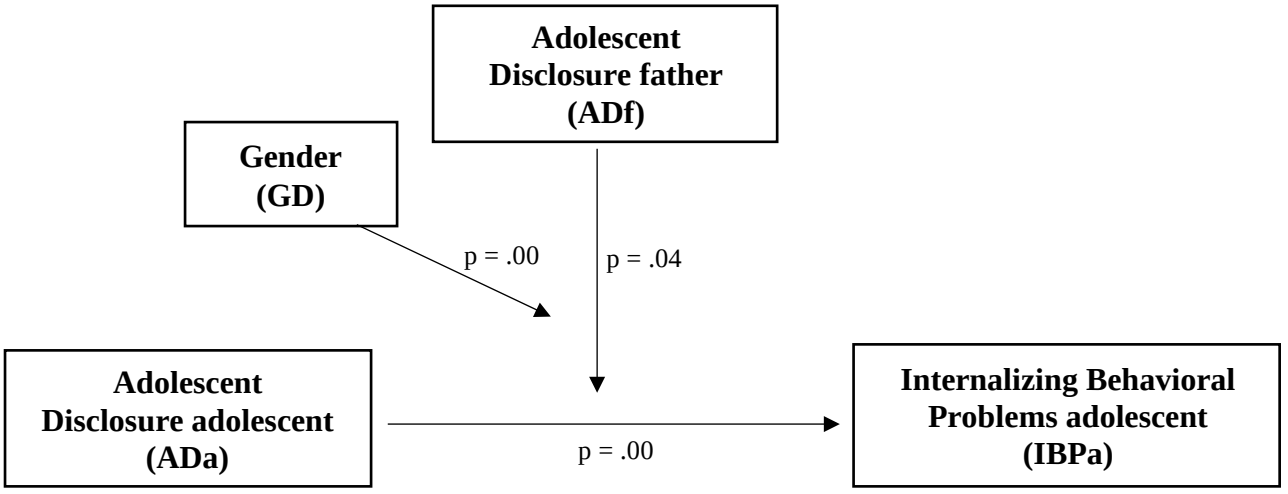


Figure 17. A conceptual diagram of the Moderation Model 3

Then, we tested whether Adolescent Disclosure adolescent (ADa) could predict preadolescents' Internalizing Behavioral Problems adolescent (IBPa) with the moderation effect of Adolescent Disclosure father (ADf) and Gender (GD). ADa was considered as independent variable and preadolescents' IBPa was the dependent variable. ADf and GD were entered as moderators into the model and AAn of adolescents as covariate.

Overall the model (R^2 = .29, F(8, 204) = 10.44, p = .001) and the interaction with GD and ADm as moderators was significant. This result suggests that ADa influences IBPa in

preadolescence, only if preadolescents are females and the ADm is low or medium (β = 4.09, t = 3.49, p = .001). Specifically, the model affirms that female preadolescents with a low and medium level of adolescent disclosure perceived by fathers and that voluntary and spontaneously revealed to their parents about friends and/or activities attended experienced less Internalizing Behavioral Problems.

4.5 Discussion

The main aim of this study was to determine overall effect sizes for parent-child, teacher-child, mother-father and teacher-parent agreement (i.e., correlations) and which informant reported more problems (i.e., difference score), comparing the correlation coefficients of parents, teachers and adolescents among groups of different gender (Fisher's z-Test) on each of the two scales measured by the CBCL and YSR: Externalizing and Internalizing Problems. Then, a second aim was to examine potential moderators (adolescents' gender and insecure attachment) of the degree of parent–child congruence in perceived behavioral problems.

Our working hypotheses were all supported except the last one, only partially confirmed.

Regarding the first three hypothesis, this study confirms that mothers and fathers of both genders were in agreement for total behavior problems. In particular, boys were agreed with both parents and teachers were agreed with only mothers and fathers of boys. Teachers and fathers had significantly higher agreement when they were rating boys. Adolescents and mothers had significantly higher agreement for girls. This result confirms that lack of congruence between parents' and children's reports about children's emotional and behavioral problems is common; meta-analyses indicate that parent–child agreement about children's symptoms tends to be low to moderate (Achenbach et al., 1987; De Los Reyes et al., 2015). During adolescence, family relationships undergo important changes that are often characterized by increases in

intergenerational conflict or disagreements between parents and children. Such changes in the interaction between family members are thought to be a result of young people beginning to seek autonomy, which is driven by the desire to establish an independent identity (Phinney, Kim-Jo, Osorio, & Vilhjalmsdottir, 2005). Previous research has indicated that increases in intergenerational conflict can affect the perceptions of the quality of family relationships and parenting (Ohannessian, Lerner, Lerner, & von Eye, 1995; Rask, Astedt-Kurk, Paavilainen, & Laippala, 2003). In fact, research shows that adolescents tend to view the family more negatively and to overestimate the number of major differences between themselves and their parents, whereas parents tend to underestimate the number of differences (Smetana, 1989; Steinberg, 1990).

Furthermore, considering difference scores among all informants, the results confirm previous literature. In fact, in community samples children and adolescents tend to report more symptoms about themselves than their parents and teachers report about them, specifically with regard to internalizing problems (Begovac, Rudan, Skocic, Filipovic, & Szirovicza, 2004; van den Ende & Verhulst, 2005). These interesting result in the consistency/method specificity for specific symptoms (e.g., Anxious/Depressed) lead to a hypothesis that different informants might view this trait very differently, almost as different traits. A similar observation was made by researchers who investigated self-reported and adult (parent and teacher) reports of anxiety and depression using different assessments (Eid et al., 2008; Geiser, 2009). They speculated that different ratings might capture different facets of anxiety and depression (e.g., school-related anxiety as compared to fear of novel experiences).

With respect to the differences between internalizing and externalizing problems, the results confirmed previous research. Whereas parents and teachers tend to be in higher agreement with each other than with the youths (Loeber, Green, Lahey, & Stouthamer-Loeber, 1989), teachers tend to report fewer problems than parents and adolescents (Zimmerman, Khoury, Vega, Gil, & Warheit, 1995). In particular, teachers were agreed with both parents of boys and only with girls'

mothers. No significant results were found in relation to the comparison of scores between parents-teachers, parents-adolescents and teacher-adolescents about externalizing problems among groups of different gender (boys vs girls). De Los Reyes at al. (2015) affirm that pairs of informants who observed children in the same context (e.g., pairs of parents or pairs of teachers) tended to exhibit greater levels of correspondence than pairs of informants who observed children in different contexts (e.g., parent and teacher).

An interesting result, concerns internalizing problems and somatic complaints. In fact, mothers and fathers had significantly higher agreement when they were rating girls and the same happen between adolescents and mothers (Larsson et al., 1999; Liu et al., 2000; MacDonald et al., 1995; McKelvey et al., 1999; Novik, 1999; Slobodskaya, 1999; Steinhausen et al., 1997; Verhulst et al., 1985; Weine et al., 1995). This result confirms the previous literature: girls in most societies tended to score higher on Internalizing kinds of problems, especially at ages 12 to 16. By contrast, boys in most societies tended to score higher on Externalizing kinds of problems, especially at ages 6 to 11 (Rescorla et al., 2007c). Additionally, the findings of Rescorla's study (2007c) indicate that parents in many societies observe increases with age in depressive feelings and decreases with age in inattentive, hyperactive, and impulsive behavior.

In relation to parental monitoring and gender differences some relevant results were found. Girls' mothers and fathers only consider parental monitoring in the same way, whereas for what concerns adolescents' view of genders were agreed only with mothers and not with fathers. Maybe we can explain this result also in terms of the APAI, in which the mother is chosen by the majority of the adolescents as the primary figure of care.

Furthermore, studies with younger children have found that fathers are less involved than mothers in monitoring and supervising their children's peer contacts (Bhavnagri & Parke, 1991; Ladd & Goiter, 1988). In middle childhood, mothers tend to monitor children more closelythan do fathers (Crouter et al., 1990), even in single-parent households (Maccoby, Buchanan,

Mnookin, & Dornbusch, 1993). One possibility is that associations between attachment and monitoring may be stronger for mothers, given that monitoring is a more central role for them than it is for fathers. Alternatively, it may be that the degree of association between attachment and monitoring for mothers and fathers is similar, even if on average fathers monitor less closely. In relation to differences among gender groups (boys vs girls), adolescents and mothers as well as fathers and mothers had significantly higher agreement when they were rating girls. This result is confirmed also in all parental monitoring scales, except in parental control in which only girls were agree with both parents. In fact, there is a higher agreement regarding child disclosure and parental control between adolescents and mothers when they were rating girls.

Finally, the last measure that concerns insecure attachment shows a higher agreement between fathers and mothers for boys. This appears to be true when we investigate the insecure attachment as a total score because the results changed when we consider avoidance and anxiety on each own. In fact, there is a higher agreement between fathers and mothers for girls considering attachment avoidance.

The last and partially confirmed hypothesis was that adolescent disclosure, parental solicitation and parental control (perceived by mothers and fathers) and gender may moderate the effects of adolescent disclosure, parental solicitation and parental control (perceived by adolescents) on internalizing and externalizing problems, after controlling respectively attachment anxiety and avoidance. No significant results were found for any of the parents neither for parental solicitation nor for parental control. Contrariwise, adolescent disclosure resulted a relevant factor in relation to internalizing problems.

In fact, the first significant model affirms that female preadolescents with a maternal low and medium level of adolescent disclosure and that voluntary and spontaneously revealed to their parents about friends and/or activities attended experienced less Internalizing Behavioral Problems. The same emerges for fathers. This result is also important compared to the previous

literature. In fact, open communication between the parent and child is a characteristic associated with secure attachment (Oppenheim & Waters, 1995), which may in turn facilitate monitoring. In the future, might be interesting to consider an attachment tool that includes all types of attachment and not just the insecure one, as in the case of APAI.

These results, taken as a whole, suggest that there is an increasing divergence between young people and their parents during middle adolescence regarding their views of the family system that is intertwined with adolescent adjustment over time.

4.6 Strengths, limitations and future directions

The results of this study provide evidence to support the growing body of literature on emotional and behavioral problems during adolescence. A first strength of the study consists in being a multi-informant research, which involved parents, adolescents and teachers regarding emotional and behavioral problems and parents and adolescents with regard to monitoring and attachment. The importance of including multiple informants in studies of behavioral problems in children and adolescents is also supported by studies from clinical populations (Achenbach & Dumenci, 2001).

This work also contributes to furthering the investigation of behavioral problems in community-based samples of adolescents by considering two aspects that had never been investigated together, such as parental monitoring and attachment.

Finally, the study sheds new light on behavioral problems in 13-year-olds, a period that in the Italian context is relevant not only for the several physical and psychological changes it entails, but also for the transition from one school to another.

Next to strengths, the present study has some limitations, which also constitute future research directions. The first limit of the study has to be identified in the small number of teachers involved in the research. This could be considered also as a future direction for other studies,

implying the suggestion to enroll a bigger sample size that could contribute in confirming or rejecting this first finding.

Furthermore, the present findings cannot address the question regarding what the direction of the association between parent–child perceptual differences about monitoring, attachment and children's emotional and behavioral symptoms. That is, do parent–child discrepancies lead to children's behavioral problems or does children's behavioral problems produce discrepancies? Although some prospective studies have tried to examine the direction of this relation, most have used less adequate analytical techniques (e.g., regression equations with discrepancy scores as the independent variable). Future longitudinal research is needed to answer these questions using polynomial regression techniques as suggested by Laird and Weems (2011).

Third, we utilized SDSs to measure discrepancies. Difference scores can be methodologically problematic (see De Los Reyes, 2011; De Los Reyes & Kadzin, 2004), and recent research has yielded a variety of novel ways of measuring disagreements (e.g., Butner et al., 2010; Mounts, 2007). Future researchers should seek to investigate discrepancies across a variety of family formations, to examine different types of adolescent outcomes, and to utilize novel ways of measuring informant disagreements.

Finally, some studies (Verhulst et al., 1990) show that direct administration of the CBCL by interviewers is more likely to ensure the involvement of parents of the more problematic children and adolescents: As a consequence, our results could be biased by underrepresentation of more severe cases.

References

Abikoff, H., Courtney, M., Pelham, W. E., & Koplewicz, H. S. (1993). Teachers' ratings of disruptive behaviors: The influence of halo effects. *Journal of Abnormal Child Psychology*, 21, 519-533.

Achenbach, T. M., McConaughy, S. H., & Howell, C. T. (1987). Child/adolescent behavioral and emotional problems: implications of cross-informant correlations for situational specificity. *Psychological Bulletin*, 101(2), 213–232.

Achenbach, T.M. (1991a). *Manual for the Child Behavior Checklist 4/18 and 1991 Profile*. University of Vermont, Department of Psychiatry, Burlington.

Achenbach, T. M. (1991b). *Manual for the Child Behavior Checklist/4-18 and 1991 profile*. Burlington: University of Vermont, Department of Psychiatry.

Achenbach, T. M. (1991c). *Manual for the Teacher's Report Form and 1991 profile*. Burlington: University of Vermont, Department of Psychiatry.

Achenbach, T. M. (1991d). *Manual for the Youth Self Report form and 1991 profile*. Burlington: University of Vermont, Department of Psychiatry.

Achenbach, T. M. (2011). Commentary: Definitely more than measurement error: But how should we understand and deal with informant discrepancies? *Journal of Clinical Child and Adolescent Psychology*, 40, 80–86.

American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders (4th ed.)*. Washington, DC: Author.

Barrett, L. F. (2006). *Are emotions natural kinds? Perspectives on Psychological Science*. 1:28–58.

Beck, K. H., Hartos, J. L., Simons-Morton, B. G. (2006). Relation of parent-teen agreement on restrictions to teen risky driving over 9 months. *American Journal of Health Behavior*. 30:533–543.

Begovac, I., Rudan, V., Skocic, M., Filipovic, O., & Szirovicza, L. (2004). Comparison of self-reported and parent-reported emotional and behavioral problems in adolescents from Croatia. *Collegium Antropologicum*, 28:393–401.

Bell, N. J., Rychener, S. R., & Munsch, J. (2001). Multiple views of the family and adolescent social competence. *Journal of Research on Adolescence*, 11, 375–400.

Bhavnagari, N., & Parke, R. D. (1991). Parents as direct facilitators of children's peer relationships: Effects of age of child and sex of parent. *Journal of Personal and Social Relationships*, 8, 423–440.

Biederman, J., Faraone, S. V., Doyle, A., Lehman, B. K., Kraus, I., Perrin, J., & Tsuang, M. T. (1993). Convergence of the Child Behavior Check- list with structured interview-based psychiatric diagnoses of ADHD children with and without comorbidity. *Journal of Child Psychology and Psychiatry and Allied Disciplines*, 34, 1241-1251.

Bird, H. R., Gould, M. S., & Staghezza, B. (1992). Aggregating data from multiple informants in child psychiatry epidemiological research. *Journal of the American Academy of Child and Adolescent Psychiatry*, 31, 78-85.

Briggs-Gowan, M. J., Carter, A. S., & Schwab-Stone, M. (1996). Discrepancies among mother, child, and teacher reports: Examining the contributions of maternal depression and anxiety. *Journal of Abnormal Child Psychology*, 24, 749 -765.

Butner, J., Berg, C. A., Osborn, P., Butler, J. M., Godri, C., Fortenberry, K. T, . . . & Wiebe, D. J. (2009). Parent–adolescent discrepancies in adolescents' competence and the balance of adolescent autonomy and adolescent and parent well-being in the context of Type 1 diabetes. *Developmental Psychology, 45*, 835–849.

Carlson, C. I., Cooper, C. R., & Spradling, V. Y. (1991). Developmental implications of shared versus distinct perceptions of the family in early adolescence. *New Directions for Child and Adolescent Development*, 51, 13–32.

Cassidy, J., & Kobak, R. (1988). Avoidance and its relation to other defensive processes. In J. Belsky, J & T. Nezworski (Eds.), *Clinical implications of attachment* (pp. 300–326). Hillsdale, NJ: Erlbaum.

Chilcoat, H. D., & Breslau, N. (1997). Does psychiatric history bias mothers' reports? An application of a new analytic approach. *Journal of the American Academy of Child and Adolescent Psychiatry*, 36, 971-979.

Crouter, A. C., MacDermid, S. M., HcHale, S. M., & Perry-Jenkins, M. (1990). Parental monitoring and

perceptions of children's school performance and conduct in dual- and single-earner families. *Developmental Psychology*, 26, 649–657.

De Los Reyes, A., Goodman, K. L., Kliewer, W., Reid-Quiñones, K. R. (2008). Whose depression relates to discrepancies? Testing relations between informant characteristics and informant discrepancies from both informants' perspectives. *Psychological Assessment*. 20:139–149.

De Los Reyes, A. (2011). Introduction to the special section: More than measurement error: Discovering meaning behind informant discrepancies in clinical assessments of children and adolescents. *Journal of Clinical Child and Adolescent Psychology*, 40(1), 1–9.

De Los Reyes, A. (2013). Strategic objectives for improving understanding of informant discrepancies in developmental psychopathology research. *Development and Psychopathology*, 25(3),669–682.

De Los Reyes, A., Augenstein, T. M., Wang, M., Thomas, S. A., Drabick, D. A., Burgers, D. E., & Rabinowitz, J. (2015). The validity of the multi-informant approach to assessing child and adolescent mental health. *Psychological Bulletin*, 141(4), 858–900.

De Los Reyes, A., Goodman, K. L., Kliewer, W., & Reid-Quinones, K. (2008). Whose depression relates to discrepancies? Testing relations between informant characteristics and informant discrepancies from both informants' perspectives. *Psychological Assessment*, 20(2), 139–149.

De Los Reyes, A., Henry, D. B., Tolan, P. H., & Wakschlag, L. S. (2009). Linking informant discrepancies to observed variations in young children's disruptive behavior. *Journal of Abnormal Child Psychology*, 37, 637–652.

De Los Reyes, A., & Kazdin, A. E. (2004). Measuring informant discrepancies in clinical child research. *Psychological Assessment*, 16, 330–334.

De Los Reyes, A., & Kazdin, A. E. (2006). Informant discrepancies in assessing child dysfunction relate to dysfunction within mother– child interactions. *Journal of Child and Family Studies*, 15, 645–663.

Eid M, Nussbeck FW, Geiser C, Cole DA, Gollwitzer M, & Lischetzke T. (2008). Structural equation modeling of multitrait-multimethod data: Different models for different types of methods. *Psychological Methods*, 13:230–253.

Eisenberg, N., Fabes, R. A., Carlo, G., Troyer, D., Speer, A. L., Karbon, M., & Switzer, G. (1992). The relations of maternal practices and characteristics to children's vicarious emotional responsiveness. *Child Development*, 63, 583–602.

Epkins, C. C. (1995). Teachers' ratings of inpatient children's depression, anxiety, and aggression: A preliminary comparison between inpatient- facility and community-based teachers' ratings and their correspondence with children's self-reports. *Journal of Clinical Child Psychology*, 24, 63-70.

Ferdinand, R. F., van der Ende, J., Verhulst, F. C. (2004) Parent-adolescent disagreement regarding psychopathology in adolescents from the general population as a risk factor for adverse outcome. *Journal of Abnormal Psychology*. 113:198–206.

Fergusson, D. M., Lynskey, M. T., & Horwood, L. J. (1993). The effect of maternal depression on maternal ratings of child behavior. *Journal of Abnormal Child Psychology*, 21, 245-269.

Frick, P. J., Silverthorn, P., & Evans, C. (1994). Assessment of childhood anxiety using structured interviews: Patterns of agreement among informants and association with maternal anxiety. *Psychological Assessment*, 6, 372-379.

Geiser, C. (2009). *Multitrait-multimethod-multioccasion modeling.* München, Germany: AVM.

Goodman, S.H., Rouse, M.H., Connell, A.M., Broth, M.R., Hall, C.M., Heyward, D. (2011). Maternal depression and child psychopathology: a meta-analytic review. In *Clin. Child Fam. Psychol. Rev*., 14, pp. 1-27

Gregory, A., Ripski, M. B. (2008). Adolescent trust in teachers: Implications for behavior in the high school classroom. In *School Psychology Review*, 37 (3), 337.

Guion, K., Mrug, S., & Windle, M. (2009). Predictive value of informant discrepancies in reports of parenting: Relations to early adolescents' adjustment. *Journal of Abnormal Child Psychology*, 37, 17–30.

Haaga, D. A., Dyck, M. J., & Ernst, D. (1991). Empirical status of cognitive theory of depression. *Psychological Bulletin*, 110, 215-236.

Hayes, A. F. (2012), "*PROCESS: A Versatile Computational Tool for Observed Variable Mediation, Moderation, and Conditional Process Modeling*," white paper, The Ohio State University.

Kazdin, A. E., & Kagan, J. (1994). Models of dysfunction in developmental psychopathology. *Clinical*

Psychology: Science and Practice, 1,35-52.
Kolko, D. J., & Kazdin, A. E. (1993). Emotional/behavioral problems in clinic and nonclinic children: Correspondence among child, parent and teacher reports. *Journal of Child Psychology and Psychiatry and Allied Disciplines*, 34, 991-1006.
Ladd, G. W., & Golter, B. (1988). Parents' management of preschoolers' peer relations: Is it related to children's social competence? *Developmental Psychology*, 24, 109–117.
Laird, R. D., & De Los Reyes, A. (2013). Testing informant discrepancies as predictors of early adolescent psychopathology: Why difference scores cannot tell you what you want to know and how polynomial regression may. *Journal of Abnormal Child Psychology*, 41(1), 1–14.
Laird, R. D., & Weems, C. F. (2011). The equivalence of regression models using difference scores and models using separate scores for each informant: implications for the study of informant discrepancies. *Psychological Assessment*, 23, 388–397.
Lanyon, R. I., & Goodstein, L. D. (1997). *Personality assessment*. New York: Wiley.
Larsson, B., & Frisk,M. (1999). Social competence and emotional/behavior problems in 6–16-year-old Swedish school children. *European Child & Adolescent Psychiatry*, 8, 24–33.
Liu, X., Kurita, H., Guo, C., Tachimori, H., Ze, J., & Okawa, M. (2000). Behavioral and emotional problems in Chinese children: Teacher reports for ages 6 to 11. *Journal of Child Psychology and Psychiatry, 41,* 253–260.
Loeber, R., Green, S. M., & Lahey, B. B. (1990). Mental health professionals' perception of the utility of children, mothers, and teachers as informants on childhood psychopathology. *Journal of Clinical Child Psychology*, 19, 136-143.
Loeber, R., Green, S. M., Lahey, B. B., & Stouthamer-Loeber, M. (1991). Differences and similarities between children, mothers, and teachers as informants on disruptive child behavior. *Journal of Abnormal Child Psychology*, 19, 75-95.
Maccoby, E. E., Buchanan, C. M., Mnookin, R. H., & Dornbusch, S. M. (1993). Post-divorce roles of mothers and fathers in the lives of their children. *Journal of Family Psychology*, 7, 24-38.
MacDonald, V.M., Tsiantis, J., Achenbach, T.M., Motti-Stefanidi, F., & Richardson, S.C. (1995). Competencies and problems reported by parents of Greek and American children, ages 6–11. *European Child & Adolescent Psychiatry, 4*, 1–13.
McCauley Ohannessian, J. V. C. (2000). Adolescent-parent discrepancies in perceptions of family functioning and early adolescent self-competence. *International Journal of Behavioral Development*, 24(3), 362–372.
McKelvey, R.S., Davies, L.C., Sang, D.L., Pickering, K.R., & Tu, H.C. (1999). Problems and competencies reported by parents of Vietnamese children in Hanoi. *Journal of the American Academy of Child and Adolescent Psychiatry, 38*, 731–737.
McLeod, B. D., Wood, J. J., & Weisz, J. R. (2007). Examining the association between parenting and childhood anxiety: A meta-analysis. *Clinical Psychology Review*, 27, 155–172.
Mogg, K., Bradley, B. P., Millar, N., & White, J. (1995). A follow-up study of cognitive bias in generalized anxiety disorder. *Behaviour Research and Therapy*, 33, 927-935.
Mounts, N. S. (2007). Adolescents' and their mothers' perceptions of parental management of peer relationships. *Journal of Research on Adolescence*, 17, 169–178.
Novik, T.S. (1999). Validity of the Child Behavior Checklist in a Norwegian sample. *European Child & Adolescent Psychiatry, 8*, 247–254.
Ohannessian, C. M., Lerner, R. M., Lerner, J. V., & von Eye, A. (1995). Discrepancies in adolescents' and parents' perceptions of family functioning and adolescent emotional adjustment. *The Journal of Early Adolescence*, 15, 490–516.
Oppenheim, D., & Waters, H. S. (1995). Narrative processes and attachment representations: Issues of development and assessment. Monographs of the Society of Research, *Child Development*, 60 (2-3), 197-215.
Pallini, S., Chirumbolo, A., Morelli, M., Baiocco, R., Laghi, F., & Eisenberg, N. (2018). The relation of attachment security status to effortful self-regulation: A meta-analysis. *Psychological Bulletin*, 144(5), 501-531.
Phinney, J., Kim-Jo, T., Osorio, S., & Vilhjalmsdottir, P. (2005). Autonomy and relatedness in adolescent–parent disagreements: Ethnic and developmental factors. *Journal of Adolescent Research*, 20, 8–39.
Rask, K., Astedt-Kurk, P., Paavilainen, E., & Laippala, P. (2003). Adolescent subjective well-being and

family dynamics. *Scandinavian Journal of Caring Sciences*, 17, 129–138.
Renken, B., Egeland, B., Marvinney, D., Mangelsdorf, S., & Sroufe, A. (1989). Early childhood antecedents of aggression and passive withdrawal in early elementary school. *Journal of Personality, 57,* 257–281.
Rescorla, L.A, Achenbach, T.M., Ivanova, M.Y, Dumenci, L., Almqvist, F., & Bilenberg, N. (2007c). Behavioural and emotional problems reported by parents of children ages 6 to 16 in 31 societies. *Journal of Emotional and Behavioural Disorders*, 15, 130–142.
Rescorla, L. A., Ginzburg, S., Achenbach, T. M., Ivanova, M. Y., Almqvist, F., Begovac, I., Verhulst, F. C. (2013). Cross-informant agreement between parent-reported and adolescent self-reported problems in 25 societies. *Journal of Clinical Child & Adolescent Psychology*, 42:262–273.
Reynolds, E. K., MacPherson, L., Matusiewicz, A. K., Schreiber, W. M., & Lejuez, C. W. (2011). Discrepancy between mother and child reports of parental knowledge and the relation to risk behavior engagement. *Journal of Clinical Child and Adolescent Psychology*, 40, 67–79.
Richters, J. E. (1992). Depressed mothers as informants about their children: A critical review of the evidence for distortion. *Psychological Bulletin*, 112, 485-499.
Sawyer, M. G., Baghurst, P., & Clark, J. (1992). Differences between reports from children, parents and teachers: Implications for epidemiological studies. *Australian and New Zealand Journal of Psychiatry*, 26, 652-660.
Shek, D. T. (1998). A longitudinal study of Hong Kong adolescents' and parents' perceptions of family functioning and well-being. *The Journal of Genetic Psychology: Research and Theory on Human Development*, 159, 389–403.
Slobodskaya, H.R. (1999). Competence, emotional and behavioral problems in Russian adolescents. *European Child&Adolescent Psychiatry, 8,* 173–180.
Smetana, J. G. (1989). Adolescents' and parents' reasoning about actual family conflict. *Child Development*, 60, 1052–1067.
Sroufe, L. A. (1983). Infant-caregiver attachment and patterns of adaptation in preschool: The roots of maladaptation and competence. In M. Perlmutter (Ed.), *Minnesota Symposia on Child Psychology: Vol. 16. Development and policy concerning children with special needs* (pp.41– 83). Hillsdale, NJ: Erlbaum.
Steinberg, L. D. (1990). Autonomy, conflict and harmony in the family relationship. In S. S. Feldman & G. R. Elliott (Eds.), *At the threshold: The developing adolescent* (pp. 255–276). Cambridge, MA: Harvard University Press.
Steinhausen, H.C., Winkler Metzke, C., Meier, M., & Kannenberg, R. (1997). Behavioral and emotional problems reported by parents for ages 6 to 17 in a Swiss epidemiological study. *European Child & Adolescent Psychiatry, 6,* 136–141.
Tarullo, L. B., Richardson, D. T., Radke-Yarrow, M., & Martinez, P. E. (1995). Multiple sources in child diagnosis: Parent-child concordance in affectively ill and well families. *Journal of Clinical Child Psychology*, 24, 173-183.
van den Ende, J., & Verhulst, F.C. (2005). Informant, gender and age differences in ratings of adolescent problem behaviour. *European Child and Adolescent Psychiatry*, 14, 117–126.
Verhulst, F.C., Akkerhuis, G.W., & Althaus, M. (1985). Mental health in Dutch children: (1) Across-cultural comparison. *Acta Psychiatrica Scandinavica, 72,* 1–108.
Verhulst, F.C., Koot, H.M., & Berden, G.F. (1990). Four-year follow-up of an epidemiological sample. *Journal of the American Academy of Child and Adolescent Psychiatry*, 29, 440–448.
Verhulst, F. E., & Van der Ende, J. (1992). Agreement between parents' reports and adolescents' self-reports of problem behavior. *Journal of Child Psychology and Psychiatry and Allied Disciplines*, 33, 1011-1023.
Waller, N. G., & Meehl, P. E. (1998). Multivariate taxometric procedures: Distinguishing types from continua (Vol. 9). Thousand Oaks, CA: Sage. Watson, D., & Clark, L. A. (1991). Self- versus peer ratings of specific emotional traits: Evidence of convergent and discriminant validity. *Journal of Personality and Social Psychology*, 60, 927-940.
Weine, A.M., Phillips, J.S., & Achenbach, T.M. (1995). Behavioral and emotional problems among Chinese and American children: Parent and teacher reports for ages 6 to 13. *Journal of Abnormal Child Psychology, 23,* 619–639.
Youngstrom, E. A., Izard, E. E., & Ackerman, B. P. (1999). Dysphoria- related bias in maternal ratings of children. *Journal of Consulting and Clinical Psychology*, 67, 905-916.

Youngstrom, E., Loeber, R., & Stouthamer-Loeber, M. (2000). Patterns and Correlates of Agreement Between Parent, Teacher, and Male Adolescent Ratings of Externalizing and Internalizing Problems. In *Journal of Consulting and Clinical Psychology*, Vol. 68, No. 6, 1038-1050.

Youngstrom, E. A., Findling, R. L., Calabrese, J. R. (2003). Who are the comorbid adolescents? Agreement between psychiatric diagnosis, youth, parent, and teacher report. *Journal of Abnormal Child Psychology*.31:231–245.

Zimmerman, R. S, Khoury, E., Vega, W., Gil, A., & Warheit, G. (1995) Teacher and parent perceptions of behavior problems among a sample of African American, Hispanic, and Non-Hispanic White students. *American Journal of Community Psychology*, 23:181–197.

CHAPTER 5

General Conclusion

The present work has mainly investigated some dynamics concerning the presence of emotional-behavioral problems in preadolescence. There were two main strengths of the study: taking into account parental monitoring and attachment and investigating these variables in a multi-informant perspective.

Having discussed the results, highlighting the limits and indicating the future directions of research, in the individual studies, we report below only a summary of the topic.

The first part of the study provided a profile of preadolescents, their parents and teachers and some preliminary descriptive results. It is a starting point for the next two studies.

The first study (CHAPTER 3) focused on the preadolescents perception of their wellbeing. The study main aim was to explore the relationship among attachment, parental monitoring and behavioral problems in a sample of preadolescents. In particular, the main goal was to investigate how monitoring and insecure attachment are related and how each of these variables and their interaction may lead to emotional and behavioral problems.

We investigated a range of moderation models, emphasizing the potential importance of complex relationships between etiological and contextual factors in determining specific developmental trajectories.

Results confirmed that parental solicitation and adolescent disclosure (monitoring' scales) always predicted both internalizing and externalizing behavioral problems. Our results also suggested that we must take into account the role of both gender and attachment as factors that

plays a role in the relationship between monitoring' scales and behavioral problems. Their role as moderators is relevant and therefore would require further investigation in the future. Moreover, the use of innovative measures, such as the APAI—allowing for continuous, multi-item assessment of central constructs such as anxiety and avoidance—provides new power and precision to investigate complex attachment-monitoring and attachment-behavioral problems dynamics, even if it requires further investigation in order to confirm its factorial structure.

The second study (CHAPTER 4) focused on a multi-informant approach. Adolescents' psychosocial adjustment takes place in the context of a changing parent-adolescent relationship (Laursen & Collins, 2009). Several theories suggest a link between the quality of parent-adolescent relationships and adolescents' behavioral problems.

For this reason, the study main aim was to explore agreement and disagreement among preadolescents' and parents' ratings in relation to behavioral problems, attachment and parental monitoring. A part was dedicated also to teachers' ratings of behavioral problems. To do this, three different Indices of Agreement were used. Correlations were used to determine overall effect sizes for each dyad's agreement, the difference score to investigate which informant reported more problems and Fisher's z-Test to comparing the correlation coefficients of parents, teachers and adolescents among groups of different gender on each of the two scales measured by the CBCL and YSR: Externalizing and Internalizing Problems.

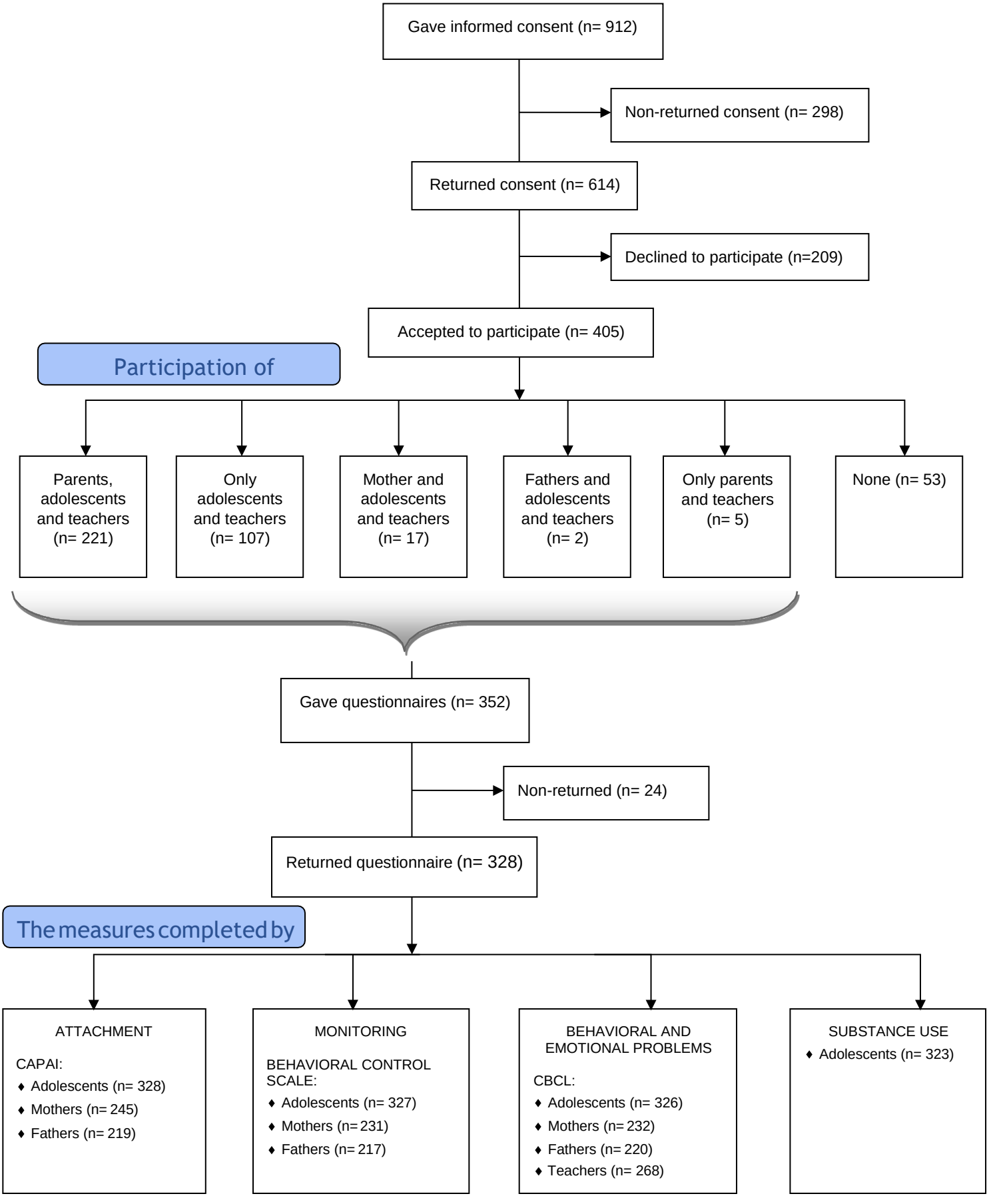
Regarding moderation models, adolescent disclosure resulted a relevant factor in relation to internalizing problems for both parents and adolescents. This result is also important compared to the previous literature. In fact, open communication between the parent and child is a characteristic associated with secure attachment (Oppenheim & Waters, 1995), which may in turn facilitate monitoring. In the future, might be interesting to consider an attachment tool that includes all types of attachment and not just the insecure one, as in the case of APAI.

Furthermore, it is important in future work to learn more about how the mode of assessing attachment affects the relation of attachment quality to other variables such as top-down self-regulation. For example, Pallini and her collegues (Pallini et al., 2018) found that a modest, positive relation between quality of children's attachment and their top-down self-regulation (effortful control). This finding is consistent with the conclusion that efforts to improve the quality of the parent-child attachment might foster children's effortful self-regulation, although it is also possible that children's top-down regulation affects the quality of their attachment or both aspects of functioning are affected by a third variable, such as genetics or maternal sensitivity.

The results of this study provide evidence to support the growing body of literature on emotional and behavioral problems during adolescence. A first strength of the study consists in being a multi-informant research, which involved parents, adolescents and teachers regarding emotional and behavioral problems and parents and adolescents with regard to monitoring and attachment. The importance of including multiple informants in studies of behavioral problems in children and adolescents is also supported by studies from clinical populations (Achenbach & Dumenci, 2001).

This work also contributes to furthering the investigation of behavioral problems in community-based samples of adolescents by considering two aspects that had never been investigated together, such as parental monitoring and attachment.

APPENDIX A: Details number for family (dis)engagement and participation in the study



[1]APPENDIX B: APAI-Y-S YOUTH ORIGINAL VERSION

Please think about one parent or caregiver who has played the <u>most important part in raising you</u>. You most likely live with this parent now, but you may be living somewhere else and still have contact with this parent. Answer all the questions based on how you feel about this parent <u>now or in the past six months</u>.

<u>Before you start, who is this parent? Circle ONE</u>:

MOM	DAD	STEPMOM	STEPDAD
FOSTER MOM	FOSTER DAD	GRANDMOTHER	GRANDFATHER

OTHER PERSON (who is this?):

Read each sentence and circle the number to show how much you agree or disagree in regard to your relationship with your parent now or in the past six months.

1	2	3	4	5	6	7
I don't agree			**I neither agree**			**I agree completely**

1. I need a lot of reassurance that I am loved by my parent.

1 2 3 4 5 6 7

2. I worry that my parent won't care about me as much as I care about my parent.

1 2 3 4 5 6 7

3. I feel comfortable depending on my parent.

1 2 3 4 5 6 7

4. I worry about being abandoned by my parent.

1 2 3 4 5 6 7

[1] Adolescent-Parent Attachment Inventory (APAI; Moretti et al., 2000).

1	2	3	4	5	6	7
I don't agree			**I neither agree**			**I agree completely**

5. I often wish that my parent's feelings for me were as strong as my feelings are for my parents.

1 2 3 4 5 6 7

6. I try to avoid getting too close to my parent.

1 2 3 4 5 6 7

7. I worry a lot about my relationship with my parent.

1 2 3 4 5 6 7

8. I tell my parent just about everything.

1 2 3 4 5 6 7

9. I often want to be really close to my parent and sometimes this makes my parent back away.

1 2 3 4 5 6 7

10. I usually discuss my problems and concerns with my parent.

1 2 3 4 5 6 7

11. I find it relatively easy to get close to my parent.

1 2 3 4 5 6 7

12. I want to get close to my parent but I keep pulling back.

1 2 3 4 5 6 7

13. I don't mind asking my parent for comfort, advice, or help.

1 2 3 4 5 6 7

14. I find that my parent doesn't want to get as close as I would like.

1 2 3 4 5 6 7

15. I turn my parent for many things, including comfort and reassurance.

1 2 3 4 5 6 7

16. It usually helps to turn to my parent for comfort in times of need.

1 2 3 4 5 6 7

[2]APPENDIX B: APAI-Y-S YOUTH ITALIAN VERSION

Pensa al genitore o alla persona che si è presa cura di te maggiormente, con cui sei cresciuto e che ha giocato un ruolo importante nella tua vita. Probabilmente ci vivi insieme, ma potresti anche vivere in un posto diverso ed essere ancora in contatto con lui/lei. Rispondi alle domande del questionario pensando a come ti senti rispetto a lui/lei <u>ora</u> o come ti sei sentito negli <u>ultimi sei mesi</u>.

<u>Prima di iniziare, scegli facendo un cerchio intorno ai nomi qui sotto, di chi vuoi parlare</u>:

Mamma	**Padre**	**Mamma adottiva**	**Papà adottivo**
Mamma affidataria	**Padre affidatario**	**Nonna**	**Nonno**

ALTRA PERSONA (chi è?): _____

Leggi ogni frase e segna il numero che meglio esprime quanto sei d'accordo o in disaccordo su ognuna di esse. Ricorda che stai parlando del rapporto con questo tuo genitore <u>ora o negli ultimi sei mesi.</u>

1	2	3	4	5	6	7
Non sono assolutamente d'accordo			**Né d'accordo, né in disaccordo**			**Del tutto d'accordo**

1. Ho bisogno di sentirmi molto rassicurato/a che mi vuole bene.
   1 2 3 4 5 6 7
2. Mi preoccupa l'idea che a lui/lei non importi di me tanto quanto a me importa di lui/lei.
   1 2 3 4 5 6 7
3. Mi sento a mio agio a dipendere da lui/lei.
   1 2 3 4 5 6 7
4. Mi preoccupa l'idea di essere abbandonato/a da questo mio genitore.
   1 2 3 4 5 6 7
5. Desidero spesso che i suoi sentimenti per me siano tanto forti quanto i miei lo sono per lui/lei.
   1 2 3 4 5 6 7

[2] Traduzione a cura di Lavinia Barone e Ada Rikani, Laboratorio Attaccamento e Genitorialità-LAG, Università degli Studi di Pavia. Traduzione autorizzata da Marlene Moretti, Fraser University, Canada

Leggi ogni frase e segna il numero che meglio esprime quanto sei d'accordo o in disaccordo su ognuna di esse. Ricorda che stai parlando del rapporto con questo tuo genitore <u>negli ultimi sei mesi.</u>

1	2	3	4	5	6	7
Non sono assolutamente d'accordo			**Né d'accordo, né in disaccordo**			**Del tutto d'accordo**

6. Cerco di evitare di avvicinarmi troppo a lui/lei.
1 2 3 4 5 6 7

7. Mi preoccupo molto riguardo al rapporto che ho con questo mio genitore.
1 2 3 4 5 6 7

8. Le/Gli racconto praticamente tutto.
1 2 3 4 5 6 7

9. Voglio stare spesso vicino a lui/lei e a volte invece lei/lui si allontana.
1 2 3 4 5 6 7

10. Di solito discuto i miei problemi e le mie preoccupazioni con questo mio genitore.
1 2 3 4 5 6 7

11. Per me è facile avvicinarmi a lui/lei.
1 2 3 4 5 6 7

12. Vorrei stare vicino a lui/lei, ma mi tiro sempre indietro.
1 2 3 4 5 6 7

13. Non ho problemi a chiedere a lui/lei conforto, consigli o aiuto.
1 2 3 4 5 6 7

14. Trovo che non voglia stare vicino a me tanto quanto io vorrei.
1 2 3 4 5 6 7

15. Mi rivolgo a questo mio genitore per molte cose; compreso conforto e rassicurazione.
1 2 3 4 5 6 7

16. Mi aiuta potermi rivolgere a lui/lei se ne ho bisogno.
1 2 3 4 5 6 7

[3]APPENDIX C: APAI-P-S PARENT ORIGINALVERSION

Please read the statements and mark the number that shows much you agree or disagree with each one. The statements are about your relationship with your child <u>now or over the last six months</u>.

1	2	3	4	5	6	7
I don't agree at all			I neither agree nor disagree			I agree completely

1. My child needs to be reassured that I love him/her.

1 2 3 4 5 6 7

2. My child worries that I don't care about him/her as much as he/she cares aboutme.

1 2 3 4 5 6 7

3. My child likes the feeling of depending on me.

1 2 3 4 5 6 7

4. My child is worried about being abandoned by me.

1 2 3 4 5 6 7

5. My child would like my feelings for him/her to be as strong as his/her feelings for me.

1 2 3 4 5 6 7

6. My child tries to avoid being too close to me.

1 2 3 4 5 6 7

7. My child worries a lot about his/her relationship with me.

1 2 3 4 5 6 7

8. My child tells me almost everything.

1 2 3 4 5 6 7

9. My child often wants to be near me and this makes me want to move away.

1 2 3 4 5 6 7

[3] Adolescent-Parent Attachment Inventory (APAI; Moretti et al., 2000).

1	2	3	4	5	6	7
I don't agree at all			I neither agree nor disagree			I agree completely

10. My child usually talks about his/her problems and concerns with me.

1 2 3 4 5 6 7

11. My child finds relatively it easy in getting close to me.

1 2 3 4 5 6 7

12. When I start to get close to my child, he/she moves away from me.

1 2 3 4 5 6 7

13. My child is comfortable sharing his/her private thoughts and feelings with me.

1 2 3 4 5 6 7

14. My child feels that I don't want to get as close as he/she wants.

1 2 3 4 5 6 7

15. My child comes back to me for a lot of things, including comfort and reassurance.

1 2 3 4 5 6 7

16. My child feels comforted when he/she can turn to me in moments of need.

1 2 3 4 5 6 7

[4]APPENDIX C: APAI-P-S PARENT ITALIAN VERSION

Si prega di leggere ogni frase e segnare il numero che meglio esprime quanto è d'accordo o in disaccordo su ognuna di esse per quanto riguarda il rapporto con Suo/a figlio/a <u>ora o negli ultimi sei mesi</u>.

1	2	3	4	5	6	7
Non sono assolutamente d'accordo			**Né d'accordo, né in disaccordo**			**Del tutto d'accordo**

1. Mio/a figlio/a ha bisogno di sentirsi rassicurato/a che io gli/le voglio bene.
   1 2 3 4 5 6 7
2. Mio/a figlio/a teme che a me non importi di lui/lei tanto quanto a lui/lei importa di me.
   1 2 3 4 5 6 7
3. A mio/a figlio/a piace sentire di dipendere da me.
   1 2 3 4 5 6 7
4. Mio/a figlio/a è preoccupato dall'idea di essere abbandonato/a da me.
   1 2 3 4 5 6 7
5. Mio/a figlio/a desidera spesso che i miei sentimenti per lui/lei siano tanto forti quanto i suoi lo sono per me.
   1 2 3 4 5 6 7
6. Mio/a figlio/a cerca di evitare di stare troppo vicino a me.
   1 2 3 4 5 6 7
7. Mio/a figlio/a si preoccupa molto riguardo la sua relazione con me.
   1 2 3 4 5 6 7
8. Mio/a figlio/a mi racconta praticamente tutto.
   1 2 3 4 5 6 7
9. Mio/a figlio/a vuole stare spesso vicino a me e questo mi porta ad allontanarmi.
   1 2 3 4 5 6 7
10. 10. Mio/a figlio/a di solito discute i suoi problemi e le sue preoccupazioni con me.
    1 2 3 4 5 6 7
11. Per mio/a figlio/a è facile avvicinarsi a me.
    1 2 3 4 5 6 7

[4] Traduzione a cura di Lavinia Barone e Ada Rikani, Laboratorio Attaccamento e Genitorialità-LAG, Università degli Studi di Pavia. Traduzione autorizzata da Marlene Moretti, Fraser University, Canada

Si prega di leggere ogni frase e segnare il numero che meglio esprime quanto siete d'accordo o in disaccordo su ognuna di esse per quanto riguarda il Suo rapporto con Suo/a figlio/a <u>ora o negli ultimi sei mesi</u>.

1	2	3	4	5	6	7
Non sono assolutamente d'accordo			**Né d'accordo, né in disaccordo**			**Del tutto d'accordo**

12. Ogni volta che siamo vicini mio/a figlio/a si tira indietro da me.
1 2 3 4 5 6 7

13. Mio/a figlio/a si sente a suo agio quando condivide i suoi pensieri e sentimenti con me.
1 2 3 4 5 6 7

14. Mio/a figlio/a sente che io non voglio stare vicino a lui/lei quanto lui/lei vorrebbe.
1 2 3 4 5 6 7

15. Mio/a figlio/a si rivolge mepermoltecose;compresoperilconfortoelarassicurazione.
1 2 3 4 5 6 7

16. Mio/afiglio/a sisenteconfortatoquandosipuòrivolgere amenelmomentodelbisogno.
1 2 3 4 5 6 7