RELATIONSHIP BETWEEN PARENTING, ALEXITHYMIA AND ADULT ATTACHMENT STYLES: A CROSS-SECTIONAL STUDY ON A GROUP OF ADOLESCENTS AND YOUNG ADULTS

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Abstract

Objective: Recent literature underlines the relationship between alexithymia and dysfunctional patterns of affective involvement in the family, demonstrating that early caregiver's sensitivity and responsiveness to child's emotions are important determinants of the regulation of distressing emotions and relationships with others.

The purposes of this study were the following: to investigate the relation between parenting, alexithymia and adult attachment styles; to measure the predictive variables of the adult attachment-related anxiety and avoidance.

Method: The participants were 140 students, of which a group of 71 high school students (M=16.59, S.D=0.67), and a group of 69 university students (M=19.04, S.D= 1.50). All participants completed the Parental Bonding Instrument, the Toronto Alexithymia Scale–20, and the Experience in Close Relationships.

Results and conclusions: In the male group, parental control seems to influence almost all alexithymia subscales, although maternal care and paternal control do not affect the tendency to externally oriented thinking. In the female group, all alexithymia dimensions seem to be influenced by parenting except the father's control.

Our results are consistent with the hypothesis that alexithymia could develop in response to interactions with primary caregivers, which could also influence infant and adult attachment.

Key words: adolescence, parenting, alexithymia, adult attachment

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Introduction

The acquisition of self-identity is considered the main developmental task of adolescence, in which individuals struggle to assert themselves as an entity - in a direction of greater autonomy (Iacolino et al. 2016, Silverberg and Gondoli 1996) - while seeking to maintain a bond with their past and accept the values shared by a group (Nauta 2010, Pellerone et al. 2015, Winne and Alexander 2006).

The literature has shown that a positive relationship with parents, characterized byfreduced conflict andfincreased parental care is related to different areas of the pre-adolescent and adolescent development, such as behavioral, relational and emotional dimensions (Brody et al. 2001, Hill and Herman-Stahl 2002, Pellerone et al. 2016a, Vieno et al. 2008).

Researchers agree that there are two fundamental dimensions of parenting, which influence social competence and emotional reactivity, that is: responsiveness and demandingness. Responsiveness is defined as parental behavior that encourages the child to develop a sense of autonomy or constitutes a prompt in response to the needs of the child (Baumrind 1991). Demandingness is defined as behavior that constitutes a demand for maturity and entails active monitoring of the child and exercising control to ensure that the child obeys rules (Stattin and Kerr 2000).

According to Baumrind's Model (1991), developmental researchers have classified two important components of parental practices, which are support and control (Pellerone et al. 2016b). Support refers to parents' capacity to be aware of and responsive to their children's needs and goals; a high parental support has been associated with greater relational capacity and psychosocial adjustment (Root et al. 2012). Control can be defined as parental practices whict guide or direct children's behavior toward acceptable and age-appropriate standards, without relying on strict or harsh punishment (Kochanska 2002).

Bowlby has theorised that, during infancy, individuals internalize models of repeated interactions with their caregiver (characterized by parental control and care), through the establishment of internal

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working models, which serve as a cognitive map for the management of interpersonal relationships during adolescence and adulthood (Bowlby 1969).

The internal representations of attachment evolve over time and are likely to experience profound reorganization, consequent to both individual development and significant life experiences, such as married life, parenthood, death, and traumatic experiences (Craparo et al. 2013). Such models represent, at least partly, the base of the beliefs of self-efficacy, influencing the modality of emotional regulation, the concept of oneself and the behavioral strategies for the management of uneasiness (Besharat and Salimian 2014).

Attachment styles

Literature underlines that adult attachment styles could be classified in the same way that Ainsworth and colleagues (1978) had categorized the children attachment, with the addition of two dimensions, anxiety and avoidance (Hazan and Shaver 1987, Main et al. 2003): while, anxiety leads individuals to fear rejection and abandonment within intimate relationships; avoidance determines discomfort with intimacy and tendency to seek independence (Craparo 2014, Craparo et al. 2014a).

Thus, attachment patterns in adult romantic relationships show similarities to those observed in infants (Hazan & Shaver 1987); in particular, secure adults evidence comfort with closeness and intimacy, anxious-ambivalent adults show an excessive concern with closeness and worry that partners will leave, and avoidant adults evidence discomfort with closeness and intimacy.

Adult attachment is the stable tendency of an individual to make substantial efforts to seek and maintain proximity with one or a few specific individuals, who provide the subjective potential for the psychological sense of security (Cassidy and Shaver 2008). These attachment bonds facilitate the development and maintenance of mental representations of the self and others, which help individuals understanding their environment. From this point of view, attachment style can be considered as an important factor that shapes individual's thoughts, feelings, and emotions.

Alexithymia

Alexithymia describes problems in affect regulations, such as difficulties with recognizing, processing and regulating emotions (De Rick and Vanheule 2006, Vanheule 2008, Vanheule et al. 2011).

In particular, the alexithymia is a multidimensional construct comprised of four components: a) deficit in affect regulation, specifically referring to difficulty identifying feelings and distinguishing them from bodily sensations stemming from emotional activation, b) difficulty describing feeling to others, c) externally oriented cognitive style and d) constricted imaginative processes or poverty of imagination (Lane et al. 1997, Luminet et al. 2006, Nemiah et al. 1976).

In more recent times, Taylor and Bagby (2013) have defined alexithymia as characterized by the following: difficulty to identify the emotions, difficulty to discriminate between psychological sensations and emotions caused by emotional activation; difficulty to find specific words to describe personal emotions; the lack of reveries; and specific ideational content, concern for the realistic details of external events and little concern for subjective significant of these events.

Although alexithymia was diagnosed for the first time in psychosomatic patients (Nemiah and Sifneos 1970) and often found in people with medical diseases or psychological disorders (Gori et al. 2014, Taylor and Bagby 2004), literature shows as alexithymia is also present in healthy people (Kokkonen et al. 2001, Salminem et al. 2006).

Relationship between parenting, alexithymia, and adult attachment styles

The attachment system provides the context in which emotional regulation strategies are developed (Craparo et al. 2014b, Lang 2010), because, through the child-caregiver interaction, the child learns emotional self-regulation models (Munteanu 2006). In particular, attachment researchers describe the influence of early attachment experiences on the evolving internal representations of the self and others and have begun to investigate how the internal working models influence future relationships, as well as affect regulating strategies in adulthood.

Furthermore, recent studies show that early caregiver's sensitivity and responsiveness to the child's emotions are fundamental determinants of the regulation of distressing emotions and relationships with others (Hershenberg et al. 2011), which are dysfunctional capacities in subjects with alexithymia (Craparo et al. 2014c, Cuzzocrea et al. 2015, Fonagy et al. 2002, Guzzo et al. 2014). For example Thorber and colleagues (2011a) reported a positive relationship between maternal and paternal overprotection and alexithymia of children (Thorberg et al. 2011b). Similarly, Lumley, Mader, Gramzow, and Papineau (1996) demonstrated a positive relationship between alexithymia and dysfunctional patterns of affective involvement in the family.

In more recent times, Hussain and Ahmed (2014) showed that perceptions of paternal and maternal acceptance were negatively correlated with alexithymia in children.

Even more interesting are the studies that investigate relationship between parenting, alexithymia and adult attachment in adolescents; in fact, alexithymia is considered as a major risk factor, above all during adolescence, considering its implications, such as low social skills which influence relationships and adjustment to peer group.

In particular, research on adolescents and young adults underlines that subjects with secure attachment style manifest lower levels of negative emotions and establish strong relationships with others, who can provide them with support during emotionally difficult situations (Besharat and Salimian 2014).

In a different way, subjects with insecure attachment style experience lower levels of positive emotions than those with secure attachments, and show inability to manage stress, anxiety, and depression, and deficits in the ability to regulate of self and of other negative affects (Montebarocchi et al. 2004).

Similarly, Fukunishi and colleagues (1999) reported that college students with maternal low care express alexithymic characteristics, in particular the difficulty communicating feelings. So, the authors concluded that poor parental bonding is related to the perceived difficulty in articulating feeling, although the development for regulating affects seem to be related only to the infant's relationship withhthe mother.

So, the literature agrees about the role of a dysfunctional relationship with a caregiver in developing alexithymia during infancy and adolescence; in particular these relationships could be characterized by emotional neglect, inconstant affective responses, and above all, discouraging the expressing of emotions to control the child (Aust et al. 2013, Hussian and Ahmed 2014).

Objective and aims

The purposes of this study are the following: to investigate the relation between parenting (according to Baumrind's Model), alexithymia (according to the Model of Taylor and Bagby), and adult attachment stylesg(according to the Model of Hazan and Shaver); to measure the predictive variables of attachment-related anxiety and avoidance.

In particular, it is hypothesized that the level of alexithymia is positively correlated with affectionless-control parentinge(Wearden et al. 2003).

Besides, on the base of recent literature (Aust et al. 2013, Hussian and Ahmed 2014), it is hypothesized that: the parental care and control influence the difficulty to identify and communicate feelings in all group of students; in the male group, externally oriented thinking is influenced by the mother's parenting, whereas in the female group, it is affected by the father's one.

Finally, it is hypothesized that: age, gender, alexithymia and parental care are the predictive variables to attachment-related anxiett; similarly, age, alexithymia and parental control are the predictive variables to attachment-related avoidance.

Materials and methods

Participants

The present study was conducted on a group of 140 subjects of which:

a) a group of 71 high school students (50.7%), aged between 15 and 18 (M = 16.59; *SD* = 0.67), of which 41 boys (57.7%) and 30 girls (42.3%);
b) a group of 69 students from "Kore" University (49.3%), aged between 19 and 23 (M = 20.04; *SD* = 1.50), of which 29 boys (42%) and 40 girls (58%).

In order to preliminarily verify the state of mental health of the participantss the group completed the *Structured Clinical Interview for DSM-IV Axis II Personality Disorders* (First et al. 1997; Italian validation by Mazzi et al. 2003), an interview used to measurefthe personality disorders, such as: avoidant, dependent, obsessive-compulsive, passive-aggressive, depressive, paranoid, schizotypal, schizoid, histrionic, narcissistic, borderline and antisocial personality disorder.

For the measurement of the variables, participants completed the following instruments: Parental Bonding Instrument (PBI), Twenty-Item Toronto Alexithymia Scale (TAS – 20), and Experience in Close Relationship (ECR).

The 25-Item Parental Bonding Instrument (Parker et al. 1979) is a questionnaire divided into two parts (one for the mother and one for the father), which values retrospectively the perception of parental style during childhood (first 16 years).

The tool investigates the parenting style through two scales, care (or affection) and control (or overprotection), from the combination of which the authors identify four types of attachment:

(a) affectionate-constraint: characterized by a high level of care and overprotection; (b) optimal parenting: high care and low protection; (c) affectionless-control: high protection and low care; (d) neglectful parenting: low care and low protection.

Assignment to "high" or "low" categories of domains is based on the following cut-off scores: 27.0 for mother's care, 13.5 for mother's control; 24.0 for father' care, 12.5 for father's control.

In adaptation for Italian population, Picardi and collaborators (2013) report the following estimates of internal consistency: 0.75 for mother's affection, 0.84 for mother's control, 0.83 for father's affection, and 0.88 for father's control.

The 20-Item Toronto Alexithymia Scale (Bagby et al. 1994; Italian validation by Bressi et al. 1996) is a 20-item self-report which assess alexithymia trough three-factor structure:

a. Difficulty Identifying Feelings – DIF (a simple item is*:* -"I am often confused about what emotion I am feeling");
b. Difficulty Communicating Feelings – DDF: (a simple item is: -"It is difficult for me to find the right words for my feelings");
c. Externally Oriented Thinking – EOT: (a simple item is: -"I prefer just to let things happen rather than to understand why they turned out that way").

The assessment is made a 5-point Likert scale (1=strongly disagree, 5= strongly agree).

The cut-off scores to categorize individuals are: alexithymia (score $\leq$ 61), borderline (52 $\leq$ score $\leq$ 60), and non-alexithymia (score $\leq$ 51). The TAS-20 shows adequate validity and reliability (α = .81; r = .77). The Italian version also demonstrates good internal consistency (Cronbach's alpha of .75 and 0.82 in normal and clinical groups, respectively).

Cronbach Alpha for TAS-20 in this study is the following: .81 for DIF subscale, .75 for DDF subscale and .68 for EOT scale.

The 36-Item Experiences in Close Relationships (Brennan et al. 1998) is used to evaluate the construct of adult attachment. Participants rate each of the 36 statements about connection using a 7-point likert scale which ranges from 1-strongly disagree to 7-strongly agree. It groups people into four different categories on the basis of scores along two scales.

The ECR is designed to assess individual differences with respect to attachment-related anxiety (i.e., the extent to which people are insecure vs. secure about the availability and responsiveness of romantic partners) and attachment-related avoidance (i.e., the extent to which people are uncomfortable being close to others vs. secure depending on others).

From the intersection of anxiety and avoidance scores they are identified four types of attachment: secure (low avoidance and anxiety), worried (low avoidance and high anxiety), detached (high avoidance, low anxiety) and fearful (high avoidance and anxiety). The difference between secure and not secure attachment was based on the cut-off 3.46 for anxiety and 2.93 for avoidance.

Brennan and colleagues (Brennan et al. 1998) reported that the ECR had a high level of internal consistency in a sample of undergraduates, with coefficient alphas of .91 and .94 for the Anxiety and

Avoidance subscales, respectively. Results from Italian studies of undergraduates (Picardi et al. 2002) also indicated a high level of internal consistency for the Anxiety subscale (α of .90) and the Avoidance subscale (α of .88).

Data analysis

All analyses were conducted with SPSS software (v 23.0).

In reference to preliminary data the following analyses were performed: descriptive analysis to measure alexithymic and non-alexithymic subjects; frequency distribution to investigate the parenting styles; T test for independent group to compare adolescents and young adult on each scale of the parenting, alexithymia and adult attachment.

Pearson's correlation was done to verify the presence of a possible relation between parenting style and alexithymia (first research hypothesis).

Univariate analysis of variance (ANOVA) was carried out to measure the influence of parenting style on alexithymia subscales (second research hypothesis).

To explore the predictive variants of adult attachment style, analyses of hierarchical regression for separate blocks were used: sex, and age in the first block; alexithymia subscales in the second block; parenting styles in the third block (last research hypothesis).

A multi-level regression analysis was performed because there was a set of hierarchical data; in fact, the data could be considered at anamnestic level (sex and age), emotional development level (alexithymia), and affective development level (parenting). Each block of independent variables was evaluated in terms of what it added to the explanation of the variability of the dependent variable at the time of its entry, evaluating the weight of all predictors.

Preliminary analyses

As the descriptive analysis reveals, in the total sample we found a 24.29% of the alexithymic subjects (TAS-20 scores ≥ 61), of which 35% in males (8.6% of the total sample) and 65% in females (15.7% of the total sample). In all groups, we found a 52.86% of non-alexithymic subjects of which 48.6% in males (25.7% of the total sample) and 51.4% in females (27.1% of the total sample).

The results also show that there are not significant differences between girls and boys in terms of alexithymia.

From the analysis of the frequency distribution on the basis of maternal parenting styles, the following emerged: 43.6% of students present affectionate-constraint, followed by 42.1% with neglectful attachment, and only 6.4% with optimal parenting.

Similarly, on the basis of paternal parenting styles, the following emerged: 47.1% of students present affectionate-constraint, followed by 27.6% with neglectful attachment, and 16.4% with optimal paternal parenting.

In reference to parenting, T test for independent group shows differences on maternal care and paternal control: the mean scores show that girls manifest higher level of maternal affect and paternal protection than males (see **table 1**).

Table 1. *Mean scores, standard deviations and T test scores on each scale of the parenting, alexithymia and adult attachment in the male and female groups*

	Male (n=70)	Female (n=70)	T Test for independent group	
Measures	**M (SD)**	**M (SD)**	**T**	**P-value**
Maternal care	23.46 (5.95)	26.89 (8.53)	-2.76	.007
Paternal care	24.17 (6.86)	25.90 (6.85)	-1.49	.138
Maternal control	17.60 (7.11)	19.37 (5.33)	-1.67	.098
Paternal control	12.51 (5.46)	17.06 (5.92)	-4.72	<.001
DIF	17.57 (5.74)	19.03 (6.35)	-1.42	.158
DDF	14.80 (4.47)	15.40 (4.22)	-.82	.416
EOT	18.83 (4.65)	18.00 (4.41)	1.08	.281
TAS total	51.20 (10.87)	52.43 (10.97)	-.67	.507
Avoidance	50.20 (14.45)	53.11 (17.16)	-1.09	.279
Anxiety	66.71 (20.28)	62.83 (16.25)	1.25	.213

Notes: *$^{***}p < .001$, two-tailed; $^{**}p < .01$, two-tailed;*
Abbreviations: DIF: Difficulty Identifying Feelings; DDF: Difficulty Communicating Feelings; EOT: Externally Oriented Thinking; TAS total: general level of alexithymia.

In reference to the age variable, there are statistically significant differences between younger and older students in terms of alexithymia and adult attachment as inferred from **table 2**; in particular younger students manifest higher level of the following dimensions: difficulty identifying and communicating feelings, general level of alexithymia, attachment-related anxiety and avoidanct.

Results

Pearson's correlation was done to measure the relation between parenting style and alexithymia. The correlation analysis shows that: paternal care is negatively correlated with externally oriented thinking; maternal control is correlated with difficulty identifying and communicating feelings; and paternal control is only associated with difficulty identifying feelings (**table 3**).

In reference to the male group, parental control seems to influence almost all alexithymia subscales,

Table 2. *Mean scores, standard deviations and T test scores on each scale of the parenting, alexithymia and adult attachment in the high school and university students*

Measures	High school (n=71)	University (n=69)	T Test for independent group	
	M (SD)	M (SD)	*T*	*P-value*
Maternal care	25.76 (7.04)	24.56 (7.99)	.94	.349
Paternal care	24.41 (6.86)	25.68 (6.90)	-1.09	.276
Maternal control	17.78 (4.62)	19.20 (7.67)	-1.33	.187
Paternal control	15.69 (5.78)	13.85 (6.35)	1.79	.076
DIF	19.68 (5.88)	16.88 (6.02)	2.77	.006
DDF	16.24 (4.22)	13.93 (4.17)	3.26	.001
EOT	18.76 (4.80)	18.05 (4.25)	.92	.361
TAS total	55.68 (9.95)	48.87 (11.11)	3.26	.001
Avoidance	56.19 (14.72)	46.99 (13.55)	3.58	<.001
Anxiety	69.58(16.19)	59.83 (19.34)	3.24	.002

Notes: *$^{***}p < .001$, two-tailed; $^{**}p < .01$, two-tailed;*

Abbreviations: DIF: Difficulty Identifying Feelings; DDF: Difficulty Communicating Feelings; EOT: Externally Oriented Thinking; TAS total: general level of alexithymia.

Table 3. *Correlation between parenting and alexithymia dimensions in all group*

Measures	a.	b.	c.	d.	e.	f.	g.
a. DIF	-						
b. DDF	.63**	-					
c. EOT	.06	.15	-				
d. TAS total	.83**	.81**	.51**	.-			
e. Maternal care	-.09	-.12	-.16	-.16	-		
f. Paternal care	-.06	-.10	-.17*	-.01	.28**	-	
g. Maternal control	.38**	.26**	.13	.37**	-.32**	.14	-
h. Paternal control	.16	.17*	.12	.20*	.08	.12	.21*

Notes: *$^{***}p < .001$, two-tailed; $^{*}p < .05$, two-tailed;*

Abbreviations: DIF: Difficulty Identifying Feelings; DDF: Difficulty Communicating Feelings; EOT: Externally Oriented Thinking; TAS total: general level of alexithymia.

although maternal care and paternal control do not affect the tendency to use externally oriented thinking (**Table 4**). Tukey's post hoc shows that: boys with difficulty identifying and communicating feelings report elevated parental control and poor parental care; boys with externally oriented cognitive style present low paternal care and high maternal control.

In the female group, the mother's care and control with the father's care seem to influence all alexithymya dimensions, but father's control does not influence alexithymia (**Table 5**). Tukey's post hoc shows that: girls with difficulty identifying and communicating feelings and with externally oriented thinking report elevated maternal control and poor parental care.

In reference to younger students, the tendency to use an externally oriented thinking seems not to be influenced by parental control and maternal care; similarly, the father's control seems not to affect difficulty identifying personal feelings (Tab. 6). The analysis of mean scores shows that: adolescents with this difficulty report elevated maternal protection and poor parental affect; subjects with difficulty to communicate feelings manifest high parental control and low parental care.

In young adults, difficulty identifying feelings seems not to be influenced by parental care and the

Table 4. *The influence of parenting on alexithymia subscales in the male group*

Measures	*DIF*		*DDF*		*EOT*	
	F	*P-value*	*F*	*P-value*	*F*	*P-value*
Maternal care	4.77	<.001	2.41	.009	1.09	.389
Paternal care	3.48	<.001	2.00	.032	2.26	.016
Maternal control	8.27	<.001	3.96	<.001	3.16	.001
Paternal control	2.71	.004	6.69	<.001	1.58	.114

Notes: *$^{***}p < .001$, two-tailed; $^{**}p < .01$, two-tailed; $^{*}p < .05$, two-tailed;*

Abbreviations: DIF: Difficulty Identifying Feelings; DDF: Difficulty Communicating Feelings; EOT: Externally Oriented Thinking.

Table 5. *The influence of parenting on alexithymia subscales in the female group*

Measures	*DIF*		*DDF*		*EOT*	
	F	*P-value*	*F*	*P-value*	*F*	*P-value*
Maternal care	3.08	.001	4.11	<.001	3.53	<.001
Paternal care	3.33	<.001	3.75	<.001	3.31	.001
Maternal control	3.46	<.001	2.82	.003	3.25	.001
Paternal control	1.055	.421	1.52	.132	1.15	.339

Notes: *** $p < .001$, two-tailed; ** $p < 61$, two-tailed;*
Abbreviations: DIF: Difficulty Identifying Feelings; DDF: Difficulty Communicating Feelings; EOT: Externally Oriented Thinking.

Table 6. *The influence of parenting on alexithymia subscales in the high school students*

Measures	*DIF*		*DDF*		*EOT*	
	F	*P-value*	*F*	*P-value*	*F*	*P-value*
Maternal care	3.52	<.001	1.94	.041	1.40	.178
Paternal care	2.49	.005	4.52	<.001	3.12	.001
Maternal control	3.66	<.001	4.63	<.001	.72	.759
Paternal control	1.53	.114	4.04	<.001	1.56	.112

Notes: *** $p < .001$, two-tailed; ** $p < .01$, two-tailed; * $p < .05$, two-tailed;*
Abbreviations: DIF: Difficulty Identifying Feelings; DDF: Difficulty Communicating Feelings; EOT: Externally Oriented Thinking.

Table 7. *The influence of parenting on alexithymia subscales in the university students*

Measures	*DIF*		*DDF*		*EOT*	
	F	*P-value*	*F*	*P-value*	*F*	*P-value*
Maternal care	1.86	.050	2.60	.005	1.40	.109
Paternal care	1.36	.200	3.02	.002	3.81	<.001
Maternal control	4.35	<.001	4.66	<.001	3.44	.001
Paternal control	1.04	.060	2.34	.012	2.09	.029

Notes: *** $p < .001$, two-tailed; ** $p < .01$, two-tailed; * $p < .05$, two-tailed;*
Abbreviations: DIF: Difficulty Identifying Feelings; DDF: Difficulty Communicating Feelings; EOT: Externally Oriented Thinking.

father's control; the mother's care does not affect the tendency to use external thinking (Tab. 7). The analysis of mean scores shows that: young adults with difficulty identifying feelings report elevated level of maternal control; individuals with difficulty to communicate feelings manifest high parental protection and low parental affect; subjects with externally oriented cognitive style seem to report elevated parental control and poor father's care.

As previously specified, an analysis of hierarchical regression for separate blocks was used to detect the predictor variables of adult attachment styles in all participants. The analysis shows how: being younger, having a high level of externally oriented thinking and maternal control are predictive of the attachment-related avoindancs, and they explain 22.2% of the overall variance (see **table 8**).

Moreover, being a female at a young age, with elevated difficulty identifying feelings, and high level of perceived paternal control are predictive of the attachment-related anxiets, explaining 24.4% of the overall variance (see **table 9**).

Conclusion and discussion

The purposes of this study were the following: to investigate the relation between parenting, alexithymia and adult attachment styles, and to measure the predictive variables of the adult attachment-related anxiety and avoidance.

The presenr study does not show a gender difference in the general level of alexithymia; this data confirms other research which showed no differences between girls and boys (Karukivi 2011, Montebarocchi et al. 2004, Pasini et al. 1996), although it does not confirm the literature which underlines the presence of a higher level of alexithymia among girls than boys (Eastabrook et al. 2013, Horton et al. 1992).

On the other hand, results show age differences (between adolescents and young adults) in regard to the different facets of the alexithymia; in particular, adolescents seem to consider themselves as less able to identify and communicate feelings, and to manifest a higher level of alexithymia than young adults. The data disconfirms literature that demonstrates alexithymia is associated with increasing age (Mattila et al. 2006, Salminen et al. 1999).

In reference to the parenting styles, .the present

Table 8. *Summary of the regression analyses predicting the level of avoidance*

Model	Variable	R^2	Adjusted R^2	SE	B	T	*P-value*
1	Age	0.09	0.08	15.23	-.29	-3.56	.001
	Sex				.09	1.08	.282
2	Age	.16	.13	14.83	-.26	-3.13	.002
	Sex				.11	1.38	.170
	DIF				-.07	-.67	.506
	DDF				.11	1.04	.299
	EOT				.23	2.89	.004
3	Age	.22	.17	14.48	-.19	-2.31	.023
	Sex				.14	1.60	.112
	DIF				.01	.140	.889
	DDF				.11	1.10	.272
	EOT				.30	3.61	<.001
	Maternal care				.08	.90	.369
	Paternal care				-.13	-1.49	.138
	Maternal control				.20	2.06	.041
	Paternal control				-.02	-.23	.820

Abbreviation: β = *beta standardized coefficients;* DIF: Difficulty Identifying Feelings; DDF: Difficulty Communicating Feelings; EOT: Externally Oriented Thinking.

Table 9. *Summary of the regression analyses predicting the level of anxiety*

Model	Variable	R^2	Adjusted R^2	SE	B	T	*P-value*
1	Age	.08	.07	17.76	-.27	-3.27	.001
	Sex				-.11	-1.34	.182
2	Age	.20	.17	16.80	-.21	-2.57	.011
	Sex				-.16	-2.00	.048
	DIF				.38	3.84	.000
	DDF				-.08	-.789	.433
	EOT				-.08	-1.00	.319
3	Age	.24	.19	16.55	-.17	-2.06	.041
	Sex				.24	2.76	.007
	DIF				.40	3.79	<.001
	DDF				-.10	-.97	.335
	EOT				-.11	-1.30	.196
	Maternal care				-.02	-.21	.835
	Paternal care				.00	-.00	.996
	Maternal control				-.05	-.57	.567
	Paternal control				.244ì	2.84	.005

Abbreviation: β = beta standardized coefficients; DIF: Difficulty Identifying Feelings; DDF: Difficulty Communicating Feelings; EOT: Externally Oriented Thinking.

study underlines a gender difference in perceived parenting, in particular, girls seem to manifest a higher level of maternal affect and paternal protection than males.

Furthermore, there are age differences in regard to the adult attachment style; in particular adolescents seem to be characterized by a higher level of anxiety and avoidance in intimate relationships than young adults.

The results of this study support the research hypothesis that alexithymia is associated with perceived parental bonding and attachment style..In particular, confirming the first hypothesis, results show that: paternal care is negatively correlated with externally oriented thinking; maternal control is correlated with difficulty identifying and communicating feelings; although paternal control is only associated with difficulty identifying feelings. In accordance with several authors, the insecure attachment style can be considered as being strictly linked with alexithymia. From this point of view, attachment patterns (secure versus insecure) may facilitate or disrupt the development of mental competence and ability in identifying and describing feelings.

Confirming the second research hypothesis, subjects with high level of maternal control seem to manifest difficulty identifying and communicating feelings, and tendency to use the externally oriented cognitive

style. This result confirms the model of Lumley and colleagues (Lumley et al. 1996), which demonstrated that externally oriented thinking was related to deficient family behaviour control, and impaired imagination was related to inadequate family problem solving. In particular, in the male group, the difficulties to identify and communicate feelings seem to be influenced by parental over-control and lack of parental care, although the externally oriented thinking seems not to be influenced by the father's over-control and the lack of the mother's care. In a different way, in the female group, alexithymia seems to be influenced by mother's parenting and father's affect, but not influenced by fathers' control. These results confirm that maternal support may be more important for daughters in some specific domains, such as self-efficacy and the perception of themselves as lovable subjects.

Why paternal dimensions did not influence the externally oriented cognitive style for female is unclear. One possibility is that the mother's parenting style is more influential in females, because Sicilian mothers typically spend more time with their children. In addition, the literature underlines that females report higher disclosure with mothers than with fathers, and this element may influence their social competence and self-esteem (Pellerone et al. *In press*).

Confirming the last research hypothesis, predictors of the attachment-related avoidance are found in adolescents with elevated externally oriented thinking and perceived maternal control; while, predictors of the attachment-relates anxiety evidence in adolescent females with elevated paternal control and difficulty identifying feelingss .

The findings of this study provide considerable support for the utility of an attachment theory perspective on the complex interactions between adult attachment behaviour, the relationship quality and alexithymic characteristics such as cognitive and affect regulation deficit.

Based on the results described herein, it is appropriate to emphasize the limits of this work, namely: the absence of a sampling method, which prevents the presence of a representative sample, the generalization of the results, and the external validity. Additionally, this study assessed adult attachment style and alexithymia in high school and university students, the generalization of the findings to younger children or adults is unknown.

Although the study underlines the presence of correlation between alexithymia and adult attachment style, a casual relationship cannot be established between these variables, because of the correlational nature of the present research.

In addition, another limit is represented by the absence of a longitudinal-type study design, which is more suitable for research involving adolescents and their identity development.

Furthermore, the alexithymia and the adult attachment type were measured through the use of self-report, which implies a risk of misleading information or social desiderability.

Our results are consistent with the proposition that parental care could be a predictor of alexithymia.

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