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Attachment in adolescence: associations with internalizing and externalizing behavior.

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To the family I got to choose.

For teaching me unconditional love and equal support.

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Resumo

Este estudo pretende investigar a relação entre a vinculação às mães, aos pais e aos pares durante a adolescência, e a sua associação com comportamentos internalizantes e externalizantes, utilizando questionários de autoavaliação. Deste modo espera-se encontrar diferentes grupos de adolescentes, com base nas percepções que têm das suas relações de vinculação. Pretende-se ainda verificar se existem diferenças entre os grupos relativamente ao ajustamento social, nomeadamente comportamentos internalizantes e externalizantes.

Participaram 134 adolescentes entre os 15 e os 18 anos de idade, e foi possível identificar três grupos, nos quais dois apresentam valores de vinculação similares para pais e pares, enquanto um grupo reporta valores mais baixos para os pais do que para os pares. Foi encontrada uma relação negativa entre a vinculação segura e os comportamentos internalizantes e externalizantes.

Palavras-chave: Vinculação, adolescência, comportamentos internalizantes, comportamentos externalizantes

Classification categories and codes:

2340 Cognitive Processes

3020 Group & Interpersonal Processes

Abstract

This study aims to investigate the relation between mother, father and peer attachment during adolescence and possible associations with social adjustment using self-evaluation questionnaires. It is expected to find different groups of adolescents based on their perceptions of their attachment relationships. It is to be verified if there exist differences between the groups for social adjustment, more specifically internalizing and externalizing behavior.

134 adolescents of aged ranging from 15 to 18 participated and it was possible to identify three groups of which two show similar attachment scores for parents and peers, while the other group reports lower scores for both fathers and mother, than for peers. A negative relation between secure attachment and internalizing and externalizing behavior was found.

Key words: attachment, adolescence, internalizing behavior, externalizing behavior

Classification categories and codes:

2340 Cognitive Processes

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Glossary of abbreviations

ANOVA – One-way analysis of variance

ASEBA – Achenbach System of Empirically Based Assessment

IPPA – Inventory of Parent and Peer Attachment

M – Mean

MS – Mean Squares

SD – Standard Deviation

SS – Sum Squares

YSR – Youth Self Report

Introduction

“Attachment Relationships” are formed during the first few months of a person’s life and have been identified as one of the most influencing relationships during the lifespan. From infancy through to adulthood, people are and become attached. Children first become attached to their primary caretakers, their parents, and as they grow older they become attached to peers and romantic partners until they themselves become someone else’s attachment figure (Bowlby, 1997).

Social adjustment has been found to be one of the outcomes of attachment relationships. Behavioral problems, such as internalizing and externalizing symptoms have been shown to be linked to insecure attachment, as they occur with a higher probability in insecure attached adolescents (Brumariu & Kerns, 2010).

The presented study aims to further characterize both parent and peer attachment during adolescence, in order to explore the connection between both types of attachment relationships and their links to internalizing and externalizing behavior.

I. State of the art

1.1. Attachment theory

“Attachment is a normal and healthy characteristic of humans throughout the lifespan” (Cassidy, 2016). The concept of attachment is based on the theory of John Bowlby and Mary Ainsworth. Bowlby recognized a biological, primal oriented need of humans to form attachments to others, namely, to their primary caregivers. Attachment as a concept describes a bond between two humans, based on emotions, cognitions and behavior, which links both through space and time. This attachment relationship is organized by a behavioral system, which has the task to assure the primary caregiver remaining close to the child, assuring their safety and supporting their learning (Bowlby, 1997).

Ainsworth defined the attachment bond as selective and specific, a link to another person, which is seen as wiser and stronger. The child seeks security and comfort in the relationship (Ainsworths, 1979). What distinguishes attachment relationships from other affectional relationships are; a need to maintain proximity, distress upon inexplicable separation, pleasure and joy upon reunion and grief at loss, as well by an experience of security and comfort obtained through the relationship. The attached person finds the ability to move with confidence off the secure base provided by the attachment figure (Ainsworth, 1989).

Attachment does not necessarily mean that attachment behavior is restricted to only one individual as the attachment figure, nor specific ages or people (for example the mother). A child can form attachment bonds with different people, however once a bond is formed it is person specific (Fraley & Shaver, 2016). Also, according to Bowlby’s theory, attachment figures are not restricted to represent only this role, but can be playmates, teachers or other figures in different moments, as not all behaviors towards the same attachment figure are in fact attachment behaviors (Cassidy, 2016).

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Attachment behavior was first investigated during infancy and in children until 2 years of age. This represents the age group for which there exists the most scientific evidence, based on the studies of Bowlby and Ainsworth (Schmidt, 2013). Bowlby (1997) and Ainsworth (1979) described how attachment behavior manifests in different ways, such as crying or running after the attachment figure, and is expressed whenever there is a lack of security and the need for proximity to the attachment figure. Attachment behavior can be described as an active behavior which brings the child to the mother and signals to her the child's needs.

The process of activating or deactivating is complex, but always tied to the behavior and location of the attachment figure, so the presence or physical contact with the attachment figure can be seen as a stimulus to end attachment behavior. In these situations, the child uses his or her attachment figure as a "safe haven", something to come back to in times of distress and fear (Cassidy, 2016).

Through the "strange situation" procedure, Ainsworth was able to identify different patterns of attachment, based upon the observation of children's behavior after being separated and reunited with their attachment figure: secure attachment (B), Insecure -avoidant (A) and Insecure- ambivalent (C). A fourth type, disorganized attachment (D), was later identified by Mary Main (Grossmann & Grossmann, 2006).

Based on observations in naturalistic setting (home) Ainsworth found that children's attachment patterns are highly influenced by maternal sensitivity. This is a mother's ability to perceive and infer the meaning behind her infant's behavioral signals, and to respond to them promptly and appropriately. More sensitive mothers tend to have more children with a secure attachment type than those who are not as sensitive. More sensitive mothers are perceived by the child as available and comforting (Ainsworth, 1979). Children described as insecure attached often have attachment experiences where the requested proximity is answered with rejection, discouragement or inconsistency (Fearon, Bakermans-Kranenburg, van IJzendoorn,

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Lapsley, & Roisman, 2010). Mary Main noticed attachment disorganization being characterized by the absence or interruption of a clear attachment behavioral pattern (Schmidt, 2013).

Although sensitivity is an important factor in the development of attachment security, it is not the most important or only influencing factor. Other aspects of parenting, only indirectly related to sensitivity, appear to be related to attachment security (De Wolff & van IJzendoorn, 1997).

Moss et al. (2004) found that mothers with higher levels of parenting stress and more difficulties managing the caregiving role have a higher probability of educating avoidant and ambivalent attached children. Parents with secure attachment states of mind are more likely to have secure attached children (Grossmann & Grossmann, 2006). Factors such as social context and environment, psychological disposition of the parents, as well as the child's temperament also play a role in influencing children's attachment types (De Wolff & van IJzendoorn, 1997; Hopf, 2005).

Studies in the United States of America and Germany showed differences in attachment security between different social groups. Hopf (2005) found that higher and middle-class parents, with higher levels of education, higher qualification jobs and higher incomes, on average have more secure attached children. A possible explanation might be that less privileged social-economic families have more stress in their daily lives which itself has an influence on maternal behavior and the mother-child relationship. Furthermore, the important role of partner support is to be highlighted, as single parents with low income have a higher probability to struggle without such support. It can also be stated that the attachment models seem to change more rapidly in "poverty samples" due to changes in the primary caretaker's life circumstances.

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Longitudinal studies tried to analyze the stability of attachment classifications. According to Moss et al. (2004) secure and insecure children tend to be more stable in their attachment classifications than disorganized children. There are different factors influencing stability rates, being that the higher risk samples are more likely to experience discontinuity in life and therefore less stability in the attachment relationship. Frequent disruptions and changes in family context, e.g., deaths of parents, a close parental figure, ongoing or fatal illness of one of the parents or self tend to lead to more unstable attachment models (Main, Hesse, & Kaplan, 2005). Secure attached children tend to maintain their secure attachment using their attachment figures as secure base and being able to contiguously internalize more complex coping and communication skills through the parent-child relationship. Insecure attached children, on the other hand, lack in flexibility and openness in the relationship which starts a downward spiral; the child's defenses grow stronger and the transition to a secure relationship becomes harder with the ongoing development. Secure children that become disorganized over time may potentially have experienced traumatic family life events or hospitalization of one of the attachment figures or the child itself (Moss et al., 2004).

1.1.2. Fathers as attachment figures

Bowlby (1997) acknowledged that fathers and mothers have different roles regarding attachment. He introduced a complementary model of the parental roles as a balance between maternal sensitivity and the father as a trusted companion. Subsequently, a series of studies which show differences between mothers and fathers in their behavior with children have been published. Both attachment figures are important for the overall attachment models of a child and future adolescent, but mothers may be more important for supporting attachment behavior and the father's importance lies in promoting exploration behavior (Brandes, Andrä, Röseler, & Schneider-Andrich, 2016). Fathers contribute in a unique way to children's emotional

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security; raising children who talk more, have a wider range of vocabulary and later on show a higher IQ (Allen & Daly, 2007; Grossmann et al., 2002). During adolescence this may translate into young adults who value their attachment relationships, as well as attachment components and mutual emotional support in friendships. Fathers who master a sensitive, yet challenging play during childhood help their children to create a positive attitude towards friendship and partnership in the future (Grossmann & Grossmann, 2006). Adolescents who grew up with involved and more nurturing fathers are happier and more likely to score high measures of self-acceptance, as well as personal and social adjustment (Flouri & Buchanan, 2003). It is equally important to highlight that having a supportive and warm relationship with one's father can compensate a low-quality relationship to the mother, and vice-versa. Furthermore, high levels of paternal support have shown to promote a confidence in consistency and availability of significant others in adolescents, as well as increased self-esteem and positive social expectations (Carr, Wolchik, Tein, & Sandler, 2018).

1.2. Attachment Throughout the Lifespan

1.2.1. First years of childhood.

Bowlby identified different phases in the development of attachment during the first years of life. The first phase, named "orientation and signal with limited discrimination of figure", describes how the child's capacity to discriminate between people is limited to smell and hearing. Attachment behavior during this stage has the function to increase the time an infant spends with a specific person. During this phase infants show friendly responses in an indiscriminate way, from 8 up to 12 weeks of age. After this time the frequency of friendly responses from the infant towards a specific person rises.

After the first three months, during the second phase, the infant continues to display attachment behavior towards all figures around him, but in a more accentuated way and more

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frequently towards his or her mother-figure. Depending on the infant's circumstances, this phase tends to last until six months of age or longer.

Subsequently infants start to progressively discriminate how they treat different people and as their behavioral repertoire extends, they start to use their mothers as a secure base for exploration. The friendly and indiscriminate behavior towards a large number of people starts disappearing and infants select subsidiary or secondary attachment figures. At this point, the attachment to the primary figure is clearly noticeable and developed. With the emergence of locomotion proximity-keeping behavior becomes more active, effective and "goal-corrected". Proximity to the attachment figure begins to be maintained with means of simply organized and goal-corrected systems that utilize cognitive maps, the first inner representations of the caregiver emerge. The child acquires the knowledge that the caregiver exists even when he or she is not present which marks the beginning of separation distress. This third phase lasts through the second and into the third year of age (Ainsworth, 1989; Bowlby, 1997).

The young child gradually gains expectations of the normality and organizes these into working models of the physical environment, attachment figures and himself or herself. Internal working models play a role in enabling the child to endure separation from the attachment figure for more time and with less distress, also they influence the child's overall sensation of security, the readiness to engage with others and patterns of emotion regulation. Repeated attachment experiences are organized in the brain as mental scripts and allow the child to think about and anticipate the future resulting in a more effective functioning (Ainsworth, 1989; Bowlby, 1997; Bretherton, 1991).

Internal working models are emotions, knowledge and expectations a child has about their own person and the attachment figures, including expectations about how the attachment figure is going to react to desires of proximity or exploring behavior. Internal working models become generalized over time, influence other personal relationships throughout life and are

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the base of a general sense of the self as lovable and worthy of care and of others as available and responsive (Cassidy, 1988).

During and after the second year of life most children direct attachment behavior towards more than one discriminated figure, but it is possible as well to observe a preference between those discriminated figures and organize them into a hierarchical order. It is usual for a child's mother to be his or her principal attachment figure, but this role can be taken by someone else, depending on who cares for the child. Subsidiary or secondary figures are commonly other figures living in the same household and are clearly preferred over non-attachment figures (Bowlby, 1997). Secondary figures may calm down a child's distress, especially in absence of the primary attachment figure, but a child will always clearly prefer the primary attachment figure, if given the choice (Zeifman & Hazan, 2016). Although the number and identity of additional attachment figures may change over time, it is more likely for secure attached children to form more than one attachment relationship, whereas insecure attached children may focus all their social behavior towards the same figure (Bowlby, 1997).

1.2.2. Preschool years

As preschool children acquire more sophisticated language skills they will begin seeking communication with the attachment figure about mutual access to one another. This allows the child to feel more in control over their situation, more competent and secure. As a result, preschool children may tolerate more extensive separations of the attachment figure with less anxiety and establish shared plans with the attachment figure. This provides security while giving an opportunity for developmental achievements away from the attachment figures. Attachment security is characterized by the integration of the child's goals, plans and behavior with those of the attachment figure while the attachment figure continues to function as safe haven. This is defined by Bowlby as the last phase of attachment development which he calls

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the goal-corrected partnership (Bowlby, 1997). It is still possible to identify similar attachment models as during infancy for secure, avoidant and ambivalent attached children (Moss, Cyr, Bureau, Tarabulsy, & Dubois-Comtois, 2005).

Beginning with the preschool age, attachment quality includes child reciprocity, perspective-taking, management of relationships and empathy (Crittenden, 1992). As the child grows more independent and more able to protect him or herself, the protection function of attachment relationships diminishes in importance, and until adulthood the activation of attachment behavior becomes less frequent (Cicchetti, Cummings, Greenberg, & Marvin, 1990)

1.2.3. Middle childhood

As children's social worlds expand, they develop a clear preference for peers over parents as playmates (Kerns, Tomich, & Kim, 2006). Attachment during middle childhood can be defined by the presence of all of the following four features, the first being a shift in the attachment goal from physical proximity to availability of the attachment figure, which starts to be noticeable during preschool years. Secondly, children can endure longer separations from their primary attachment figures, as long as they know it is possible to make contact or return if they feel the need. Thirdly, whilst parents remain primary attachment figures, the child learns to use them more as a resource for support rather than a direct mean to solve problems. Finally, secure attachment is also associated with greater social, emotional and cognitive competence and less behavioral problems during middle childhood. Attachment security leads to lower levels of externalizing behavior, such as conduct and attention problems and lower levels of internalizing symptoms (Kerns & Brumariu, 2016).

1.2.4. Adolescence

Adolescence is defined as being a phase of life between childhood and adulthood where children distance themselves from their childish dependence and grow into adult behaviors and

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role models. It acts as a transitional period between the relationships that were established in a parent-child context and the emotional bonds in adulthood, formed aside from the family context. It is a time where the feelings of “being attached” and “becoming an attachment figure” coexist. Adolescence is a stage that is highly influenced by the interaction of the teenager with his or her contexts and during adolescence the teenagers go through transformations of the emotional, cognitive and behavioral systems and face developmental tasks such as the reflection about the ongoing changes, their social roles and belonging to a specific sex, gender or social group (Jongenelen, Carvalho, Mendes, & Soares, 2009; Schwarz, 2013). Since adolescence is a heterogenic phase it is difficult to establish a common pattern and rigid delimitation of beginning and ending (Sampaio, 2006).

While it is possible to find autonomous behavior and decision making in a lot of young adults, depending on which life aspect is looked at, all adolescents show a tendency to establish autonomy towards their family of origin and to build an integrated self (Sampaio, 2006). Some of the many challenges adolescents have to face during this phase are founding emotional self-sufficiency and learning how to not rely on their primary attachment figures to fulfill their attachment needs, while the parental relationships grow a new complexity (Allen & Tan, 2016). Grossmann and Grossmann (2006) found that the challenges faced may be different depending on social environment, cultural context and gender, but the quality of the struggles is equal for all in this age. This age group shows a higher rate of risk behaviors such as smoking, consuming of alcohol and/or drugs, sexual intercourse without protection, etc.(Sampaio, 2006).

In terms of attachment experiences, adolescents start integrating attachment-relevant experiences and to reevaluate the nature of their parental relationships more critically and more objectively and are able to de-idealize the parents themselves. They can compare relationships with different attachment figures to one another and to hypothetical ideals, which allows them to see their parents in both positive and negative ways. Adolescents with secure attachment are

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more likely to go through an overall positive de-idealization of the parents, allowing secure attachment to stay secure, but this process also tends to add negative experiences to insecure attachment states of mind (Allen & Tan, 2016).

The emotional bond between parents and adolescent does not lose importance during this period and beyond, as even insecure bonds continue being important and influential. The balance between autonomy and commitment can be compared to what happened in the early childhood years between safe haven and secure base. But, friendships, romantic relationships and relationships to other adult figures grow in importance. Most adolescents switch constantly between autonomy and relatedness. They feel less need to depend on parental attachment figures and a greater need to explore and master new environments alone, so exploration becomes a central role of attachment behavior in parent-child relationships. Secure attachments do not manifest through the earlier known attachment behavior, especially not in public, but through psychological proximity and communication in case of arousal or distress. Less trust in their relationship to parents tends to manifest as less communication, a lack of shared personal issues and less seeking of help and support (Allen & Tan, 2016; Grossmann & Grossmann, 2006).

During early to mid-adolescence two profiles of attachment behavior in periods of distress were found. Either the adolescent turns to his or her parents in case of distress, continuing to use them as a secure base or the adolescent may avoid such support seeking behavior, especially when distressed, to establish a new emotional autonomy. Evidence was found as well which shows that less explorational behavior during adolescence may lead to less long-term romantic relationships and less productive careers (Allen et al., 1995). But the transition from dependence on primary attachment figures to greater autonomy may be more difficult for adolescents who show insecure attachment state of minds (Borelli, Compare, Snavely, & Decio, 2015).

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Allen and Tan (2016) found, that parents continue to be the primary attachment figures especially in situations of high distress, such as illness, danger or separation. In order for the goal-corrected partnership to endure, it will establish a new shared goal: help the adolescent develop a capacity to meet attachment needs autonomously. This establishment of a common goal might be a way for secure attachment bonds to remain strong, even if the adolescent may feel the urge to not be attached sometimes. The attachment relationship with the caregivers will influence the quality of peer relationships and social interactions during adolescence (Grossmann & Grossmann, 2006; Kerns & Stevens, 1996). Alan Sroufe argued that the idea of insecure attachment experiences with the parents being compensated by peer non-romantic relationships, may be hard to prove given that insecure attached adolescents are likely to have less satisfying and positive peer relationships from the beginning (Grossmann & Grossmann, 2006).

A secure attachment model results in a more mature concept of friendship, more trust, better conflict management, less hatred and easier contact with peers during social interactions (Zimmermann, 2004). These adolescents may have more rewarding interactions and relationships with others and more positive social interaction patterns with peers. It is as well linked to less loneliness, a higher friendship quality, a higher number of daily social interactions and a healthy personality development (Kerns & Stevens, 1996).

Adolescents with a secure attachment organization may show more competence in close friendships, more comfort with intimate emotional interactions, higher quality friendships and less stress in peer relationships, which makes attachment security relevant for a positive functioning in close relationships. Contrary, adolescent with avoidant attachment show more negative self-perceptions of peer relationships and insecure attached adolescents have a potential difficulty in handling the intensity of close friendships (Allen & Tan, 2016).

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DiTommaso, Brannen-McNulty, Ross, & Burgess (2003) discovered that adolescents with secure attachment had higher social and emotional communication skills and felt less need to constantly meet other people's social expectations.

With the beginning of adolescence, the engagement with peers increases in order to facilitate possible future attachment bonds (Rosenthal & Kobak, 2010). Peer relationships start assuming the roles they will probably have for the rest of the lifespan, such as being sources of intimacy, feedback about social behavior, social influence, information, attachment, sexual relationships and lifelong partnerships (Collins & Laursen, 2004). The capacity for adult-like intimacy and supportiveness emerges gradually and derives from prior attachment relationships with the parents. In this sense, the behavior learned with the parents is transferred, as well as characteristic strategies of each individual for dealing with attachment related thoughts, feelings and memories (Allen et al., 1995). Hazan & Shaver (1987) found that long-term relationships with peers can serve as attachment relationships in all senses. Different to the attachment relationships in infancy, characterized by extreme vulnerability and complete dependence on the caregivers, attachment relationships during and after adolescence are defined by both of the involved taking, at different times, the care-seeking and care-giving role of the relationship. Furthermore peer relationships take over specific attachment functions, even if less synchronously, less intense than in infancy and with the primary attachment figures (Allen & Tan, 2016). Furman (2001) suggests that peers only serve proximity-seeking and safe-haven functions, but fail to show signs of separation distress and enduring commitment. Rosenthal & Kobak (2010) question if attachment bonds with friends are an adaptive pattern during adolescence, since friends have a different function, to give emotional support and help gain autonomy from the primary attachment figures.

Zeifman and Hazan (2016) found, using an interview measure of all four attachment components, fully established attachment relationships only among older adolescents. The

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majority of these relationships were established with a romantic partner. The authors therefore propose that the four features of attachment bonds are still present in adolescent attachment relationships, even if they suffer some changes. Separation distress is less apparent and attachment evolves from being asymmetrical (complementary) to being symmetrical and reciprocal attachments. But the development of attachment relationships to peers takes time, approximately two years, what may explain why full-grown attachment relationships could only be found in the oldest age group. Even in adolescence attachment bonds continue to be very selective and only few friendships or supportive relationships will eventually become attachment bonds (Rosenthal & Kobak, 2010).

Additionally, attachment hierarchy starts to change, adolescents may start preferring peers, and later on romantic partners, whenever the attachment system is activated. This is only true depending on the stressor, in non-emergency stress situations adolescents are more likely to prefer a close peer instead of a parental attachment figure. Mothers have a higher probability to stay on top of the hierarchy than fathers, which is associated with the adolescent's perception of parental acceptance and accessibility. The healthiest approach on the shift from parents to peers or romantic partners as center of the adolescent attachment system is for it to happen gradually and somewhat intentionally (Allen & Tan, 2016; Rosenthal & Kobak, 2010).

Laible, Carlo and Raffaelli (2000) found that parent and peer attachments serve similar, but not necessarily equal functions in terms of adolescent adjustment. Adolescents with a strong and secure attachment to both peers and parents report best overall adjustment. The authors suggest it may be important for a healthy social adjustment to have multiple attachment figures and that the hierarchical organization of these multiple relationships will change in order to put peers over parents from adolescence on. This may be right at least in terms of social adjustment including variables such as aggression, sympathy and depression. Rosenthal and Kobak (2010) suggest that the placement of friends over parents in attachment hierarchies is associated with

lower levels of parental acceptance and shorter romantic relationships, resulting in an effort to compensate for poor or nonexistent relationships with mothers, fathers or romantic partners. Furthermore, they found a positive relation between a high placement of friends in attachment hierarchies and behavioral problems.

1.3. Attachment and externalizing and internalizing symptoms

Externalizing and internalizing are terms used to distinguish two kinds of behavioral problems. For both externalizing and internalizing problems, it is noticeable that an individual who experiences a symptom of one type is more likely to experience other symptoms of the same type as well. Being used to distinguish different types of behavioral problems does not necessarily mean that they exclude one another, an individual showing externalizing behavior may as well experience internalizing symptoms and vice versa.

Externalizing problems relate to one's external world and include aggressive behavior, delinquency, substance use, risky driving and unprotected sex. Adolescents with externalizing problems will often be described as lacking self-control over their own behavior. Externalizing behavior presents the characteristic that it will be perceived as a problem by adults, but the adolescent may not perceive his or her behavior the same way. Also, participation in delinquency and other risky behavior is more common for boys, but generally common between adolescents and may not be necessarily related to psychological distress. Adolescence marks a phase between parental control during infancy, and the obligations and expectations during adulthood, and as such presents less social control, showing an increase in risk behavior (Arnett & Hughes, 2012).

Internalizing problems are typically related to a person's internal state, showing over-controlled behavior, self-punishing personalities, concealed and internally directed symptoms and include anxiety, depression or eating disorders (Arnett & Hughes, 2012). Both anxiety and

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depressive disorders can be linked to children's adaptation, high levels of each can cause disruptive behavior, difficulties in social adjustment, academic difficulties and later substance abuse (Fonseca & Perrin, 2001 cit. by Brumariu & Kerns, 2010). 10% to 35% of Portuguese samples of adolescents reported to have practiced self-harm at least once during their life, with a higher number of females. These behaviors are shown to be related to higher psychopathology as well as anxiety, depression, impulsivity and aggression (Guerreiro & Sampaio, 2013).

There are some gender related differences in behavioral patterns, and Keenan and Shaw (1997) found support for two explanatory theories: girls are socialized towards over-controlling (internalizing) behavior and dealing with problems in an internalizing way from early age on, they are educated to inhibit externalizing problems. The authors were able to identify social and developmental influences that put girls in a disadvantage to meet the demands of adolescence and puberty, putting them at risk for developing behavioral problems.

There exist multiple factors that influence the development of behavioral problems. These factors can be familiar, larger environmental context, neighborhood, and the school context. Familiar variables, such as insecure attachment, lack of discipline and an intertwined influence of child's characteristics, environmental factors and parental relationship characteristics, can explain the appearance of externalizing and internalizing behavioral problems (van Anken, van Hoek, Michorius, & Vergeer, 2013). Allen, McFarland, McElhaney and Marsh (2007) observed that attachment during adolescence is linked to the development of psychosocial dysfunction symptoms. Secure attached adolescents tend to create relationships characterized by balance of autonomy and relatedness and therefore have more and stronger relationships. Attachment insecurity is linked to higher levels of depressive symptoms for females, manifesting as a steady pattern of increased depressive symptoms. This translated into a trend towards higher levels of externalizing behavior at early adolescence which tend to

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increase more over time. Attachment insecurity is linked to long-term psychological dysfunction.

Underlining the effect of attachment on behavior problems are the findings that alienating feelings towards the parents are mediators for alienation feelings towards peers and friends, which themselves are independent mediators for the development of emotional problems. The same applies for behavioral problems, which are affected by lack of trust in parents, as well as in friends. The authors found a positive relation between reported externalizing and internalizing behavior and less trust, less communication and more isolation from parents. Also, they found a negative correlation between communication and affective proximity, mutual comprehension and acceptance and problem behavior, both findings for pre-adolescent Portuguese students and their parents (Diogo & Machado, 2017). Other authors found insecure attachment to be related to diverse behavioral problems such as externalizing and internalizing, underlining the importance of parental attachment quality even after the first years of life (Machado & Oliveira, 2007).

Several risk factors for the development of externalizing behavior problems can be identified, such as sociocultural, parenting and care-giving experiences and peer-group experiences. For example, if boys have mothers who value aggression and use harsh discipline parenting methods, and girls have more uninvolved fathers, both are in higher risk of developing externalizing behavior problems (Deater-Deckard, Dodge, Bates, & Pettit, 1998).

Hopf (2005) recognized that adolescents who experienced socio-economic hardships risks during infancy are more likely to develop delinquent behavior and have unsecure-avoidant infant attachment. Thus, there exists a link between low social status and a higher delinquency and aggression, but also girls are less delinquent than boys.

After reviewing different studies, which are consistent with Bowlby's theory, Brumariu and Kerns (2010) found that attachment insecurity is modestly related to internalizing

symptoms, such as anxiety and depression and that these associations are stronger in adolescence. A possible explanation for the stronger association in older ages could be, that there is less influence of mediating processes as they become less flexible, and patterns of information processing, regulation and self-views become clearer and more automatic over time. Allen, McElhaney, Kuperminc, and Jodl (2007) discovered evidence for this presumption, as they found the internal organization of an individual's state of mind to have stabilized by mid-adolescence. Especially preoccupied states of mind show a higher probability of developing internalizing symptoms such as depression, anxiety disorders or stress during transitions (Larose & Bernier, 2001).

Other authors observe that a poor parental relationship is positively associated with suicidal behaviors in girls and boys and female peer relationships being more strongly related to suicidal ideas than male ones (Fotti, Katz, Afifi & Cox, 2006). Allen et al. (2007) identify depressive symptoms to be predicting of a decrease in adolescent attachment security over a two-year period, suggesting a relation between attachment security and internalizing behavior.

1.4. Goal of the study

Based on the state of the art it is possible to find clear links between attachment patterns and behavior from infancy to school age. It has been proved that these relations continue to exist during adolescence, as well as that there exists a connection between the attachment patterns shown with parents and those with peers.

The aim of this work is to contribute to the knowledge about attachment in adolescence and its outcomes, especially externalizing and internalizing behavior with the help of adolescent's self-evaluations. It is one goal to identify different groups of adolescents based on their perception of the relationships with their parents and peers. One or more groups with the same attachment pattern for parents and peers and another with different patterns.

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Furthermore, will be investigated if there exist significant differences in between these groups regarding externalizing and internalizing behavior, using a self-evaluation questionnaire. Is it possible to verify the assumption found in literature, that secure attached adolescents show less internalizing and externalizing behavior?

II. Method

2.1. Participants

134 adolescents participated in this study, aged between 15 and 18 years ($M=16.78$, $SD=.94$). 43.3% attended the 10th grade, 46.3% the 11th grade and the remaining attended the 12th grade. 87 subjects were male (64,9%), 47 female (35,1%) and 95.2 % were Portuguese. 69.4% lived in nuclear families with both their parents and, if they had any, siblings, while 30.6% lived with single parents, in a three-generation household, with a guardian or other family members. 30 Students attended a public school in the district of Lisbon and 104 attended a professional school in the district of Santarém. The subject's mothers ages ranged from 35 to 58 ($M=44.07$, $SD=5.56$) and father's ages was 35 - 65 ($M=46.34$, $SD=5.90$). 91.9% of the mothers and 94.3% of the fathers had a Portuguese nationality. Mother's education level varied between zero and 24 years ($M=10.12$, $SD=4.34$) and fathers between 4 and 19 years ($M=8.89$, $SD=3.59$). 79.7% of the mothers and 90.8% of the fathers worked, the remaining being unemployed. The presented sample is a convenience sample.

2.2. Instruments

2.2.1. Demographic questionnaire

The demographic questionnaire enclosed a variety of information to further characterize the social and economic background of each study participant. Each questionnaire was filled out by the participants' parents or guardian and identified the parent's age, nationality, civil state, number of children, completed scholarly education, professional situation and earnings, and additional information detailing the age, sex and nationality of the participant him or herself.

2.2.2. IPPA – Inventory of parent and peer attachment

The Portuguese version of the “Inventory of Parent and Peer Attachment” was developed based on the original version from Armsden and Greenberg (1987) by Figueiredo and Machado (2010). It assesses the individual perception of security or insecurity in the relationship with parents and friends (Machado & Figueiredo, 2010).

There are two types of the IPPA, both are self-report measures and contain 25 items. The first type evaluates the attachment to parents and was answered according to mother and father separately, the second type evaluates peer attachment. For each type the items can be organized into three sub scales: 1) *Communication and Emotional Proximity*, which evaluates the quality of communication and feelings of proximity towards the parents; 2) *Mutual respect and comprehension*, which evaluates the perception of mutual respect and the capacity to understand the other; 3) *Distance and rejection*, evaluating the feeling of emotional distance and rejection the adolescents feel towards their parental figures.

Although both versions have the same sub-scales the items composing Parents and Friends versions are not always the same. For parents (mother and father) the sub-scale *Communication and Emotional Proximity* is composed by 12 items (1, 5, 7, 12, 13, 15, 16, 19,

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20, 21, 24, 15), the subscale *Mutual Respect and Comprehension* has 6 items (2, 3, 4, 10, 17, 22), and the *Distance and Rejection* subscale contains 7 items (6, 8, 9, 14, 18, 23). For Peers the subscale *Communication and Emotional Proximity* contains 10 items (1, 2, 7, 12, 15, 16, 17, 19, 24, 25), the subscale *Mutual Respect and Comprehension* 9 items (3, 5, 6, 8, 9, 10, 13, 14, 20) and the subscale *Distance and Rejection* 5 items (4, 11, 18, 22, 23).

Participants answered on a five-point *Lickert* scale: 5 (a lot of times) to 1 (Never true). Negative items (3, 5, 10, 17) are inverted. For each subject the final score for perception of attachment security is obtained by adding the score of the two dimensions *Communication and Emotional Proximity* and *Mutual respect and comprehension*, and then subtract the score for the *Distance and rejection dimension* (Machado & Figueiredo, 2010).

The scales reliability was calculated with the studies own data. For the IPPA for mothers, the total alfa found $\alpha=.74$ (*Communication and Emotional Proximity* $\alpha=.94$, *Mutual Respect and Comprehension* $\alpha=.78$, *Distance and Rejection* $\alpha=.75$), the total alfa found for fathers IPPA was $\alpha=.85$ (*Communication and Emotional Proximity* $\alpha=.97$, *Mutual Respect and Comprehension* $\alpha=.88$, *Distance and Rejection* $\alpha=.74$). The alfa found for the peer attachment questionnaire as a total was $\alpha=.81$, revealing a good internal consistency (*Communication and Emotional Proximity* – $\alpha=.91$, *Mutual Respect and Comprehension* – $\alpha=.76$, *Distance and Rejection* – $\alpha=.68$). Given the alfas presented it is possible to assume a solid and consistent instrument.

2.2.3. YSR – Youth self-report

The Youth Self Report is part of the Achenbach System of Empirically Based Assessment (Achenbach, 1991). It was adapted to the Portuguese population in 2014 (Achenbach et al., 2014). It's a self-report questionnaire for children and adolescents between 11 and 18 years of age aiming to assess subject's behaviors, problems and competences. The

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questionnaire is divided into two sections, the first 20 questions are related to subject's competence in different areas of their lives and social background. The second part has 112 items, 103 related to specific behavioral problems, for example "I behave too childish for my age" or "I feel lonely" and 16 items related to socially desirable behavior (items 6, 15, 49, 59, 60, 73, 80, 88, 92, 98, 106, 107, 109, 109). In this study only the second part was used. Each item was answered using a scale ranging from 0 (Not true) to 2 (Very often or often true) and a 6-month time frame (Achenbach et al., 2014). For the presented study only the second section was used.

The total score for the YSR is the sum of scores obtained for each item. There can also be calculated 8 Syndrome Scales: anxiety/depression (items 14, 29, 30, 31, 32, 33, 35, 45, 50, 52, 71, 91, 112), Isolation/depression (items 5, 42, 65, 69, 75, 102, 103, 111), somatic complaints (items 47, 51, 54, 56sa, 56b, 56c, 56d, 56e, 56f, 56g), social problems (items 11, 12, 25, 27, 34, 36, 38, 48, 62, 64, 79), thinking problems (items 9, 18, 40, 46, 58, 66, 70, 76, 83, 84, 85, 100), attention problems (items 1, 4, 8, 10, 13, 17, 41, 61, 78), delinquent behavior (items 2, 26, 28, 39, 43, 63, 67, 71, 81, 82, 90, 96, 99, 101, 105) and aggressive behavior (items 3, 16, 19, 20, 21, 22, 23, 37, 57, 68, 86, 87, 89, 94, 95, 97, 104). These scales can be organized into two scales: Internalizing (syndrome scales anxiety/depression, insolation/depression, somatic complaints) and Externalizing (delinquent behavior, aggressive behavior) (Achenbach et al., 2014).

Regarding the questionnaire's reliability, using the studies own data, for the total scale was found an alfa of $\alpha=.92$ and for the scales were found the following alfas: anxiety/depression $\alpha=.74$, isolation/depression $\alpha=.68$, somatic complaints $\alpha=.71$, social problems $\alpha=.64$, thinking problems $\alpha=.70$, attention problems $\alpha=.72$ (after deleting item 17), delinquent behavior $\alpha=.63$, aggressive behavior $\alpha=.78$, internalization $\alpha=.85$, externalization $\alpha=.81$.

2.3. Procedure

The first step of the study was to contact different schools, public and private, in the district of Lisbon and neighboring districts, in order to obtain authorization to conduct the research at their institutions. Two schools agreed to participate, one in the district of Lisbon and another in the district of Santarém. After authorization from the school principal, informed consents were sent to parents of adolescents from whose class teachers agreed to participate. With the informed consent, parents were asked to respond to a sociodemographic questionnaire. Students whose parents had given informed consent to participate had themselves the chance to withdraw from the study if they did not want to participate.

After obtaining the parents' and students' informed consent, a date was scheduled with the responsible teacher for each class. The students answered individually to the IPPA for mother, father and peers (Machado & Figueiredo, 2010), as well as the Portuguese version of the YSR (Achenbach et al., 2014). After finishing, each participant put their answers into an envelope already containing the parent's questionnaire. This way it was possible to match the parents answer to those of the students, without compromising privacy and anonymity. 159 High School students responded to the questionnaire, 14 were excluded afterwards based on their age, and 11 were excluded, because the subjects were able to answer the attachment questionnaire regarding only one of both parental figures.

After inserting all found data into a database the same was analyzed using *IBM SPSS Statistics 23.0 for Mac*.

III. Results

3.1. Preliminary analysis

First descriptive statistics were computed for the variables in study such as the total scores for mother, father and peer attachment, scores for internalizing and externalizing problems and the total YSR score, as shown in table 1. The total sample mean for peer attachment was the highest, followed by mother and father attachment. The medium score for internalization was higher than for externalization problems, as well as it was higher than the total YSR score.

Table 3.1.

Descriptive statistics for variables attachment and behavioral problems

	Measure	M	SD	Min	Max
IPPA	Mother attachment	5.28	2.05	-1.75	9.00
	Father attachment	4.68	2.69	-2.83	9.00
	Peer attachment	6.10	1.57	1.56	9.00
YSR	Internalization	.52	.27	.05	1.26
	Externalization	.43	.22	.06	1.23
	Total YSR	.50	.23	.20	1.65

Normality of distribution was assessed for all output variables, using skewness and kurtosis. All variables showed values inside the range ($sk < |3|$; $ku < |10|$). Additionally, according to the theory of the central limit, the distribution of a sample reaches normality as the size increases, given the present sample size a normal distribution was assumed (Maroco & Bispo, 2005).

Same-sample t-tests were run to ensure for significant differences between overall means for attachment scores and behavioral problems. For all variables the differences were statistically significant.

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Table 3.2.
Group differences for all outcome variables

	Measure	M	t (133)
IPPA	Mother attachment	5.38	29.83
	Father attachment	4.68	20.15
	Peer attachment	6.10	44.96
YSR	Internalization	.52	22.15
	Externalization	.43	22.83
	Total YSR	.50	24.98

$p < .001$ for all measures

Correlations between outcome variables and between outcome and sample variables were analyzed and as shown in table 3, were found correlations between the civil status of the parents and mother and father attachment scores ($r = -.19$; $r = -.26$), between father and mother attachment scores ($r = .78$), between mother and peer attachment scores ($r = .31$), between father and peer attachment scores ($r = .25$) and between each attachment score and externalizing, internalizing and total YSR scores. Also, there were correlations between externalizing, internalizing and total YSR scores. Correlations were found as well between the participants age and externalization ($r = .18$) and the participants sex and internalization ($r = -.39$), as well as between mothers' and fathers' educational level ($r = .46$). Correlations between educational levels were not further included in the analysis, because they did not show correlations to any other outcome variable.

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Table 3.3.

Sociodemographic characteristics and correlations to outcome variables

Measure	1	2	3	4	5	6	7	8	9	10	11
1 Civil status	-										
2 Mothers educational level	-.07	-									
3 Fathers educational level	-.05	.46**	-								
4 Age	.00	.01	-.14	-							
5 Sex	.03	.06	.06	-.03	-						
6 Mother Attachment	-.19*	.01	-.05	.01	.15	-					
7 Father Attachment	-.26**	.03	-.01	-.10	.16	.78**	-				
8 Peer Attachment	-.06	-.08	.03	.11	-.16	.31**	.27**	-			
9 Internalization	.15	.04	.04	.05	-.39**	-.51**	-.43**	-.27**	-		
10 Externalization	.02	-.04	-.06	.18*	-.01	-.37**	-.34**	-.23**	.37**	-	
11 Total YSR	.09	.10	.07	.05	-.17	-.45**	-.35**	-.29**	.75**	.60**	-

* p < .05 ** p < .01

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Based on correlations found, different tests were performed in order to control the variables effect on the outcome variables.

A t-test for independent samples using gender as grouping variable was computed to control mean differences in outcome variables scores. There were significant differences found between the two groups only for internalizing behavior ($t(132) = 4.83, p < .001$), presenting a higher score for female internalizing behavior ($M = .67, SD = .28$) compared to male internalizing behavior ($M = .45, SD = .24$).

A Linear regression was run to analyze the correlation between the participants age and externalizing scores, using age as independent variable and externalizing scores as outcome variable. The model found fulfilled all necessary conditions and the model explained 3% ($R^2 = .03$) of the variance of externalization scores and is significant ($F(1,132) = 4.45, p = .04$). As expected based on correlations, age has a positive effect on externalizing scores ($B = .04, t = 2.11, p = .04$).

To analyze correlations between parental civil status and the participants mother and father attachment scores were run two regressions, defining civil status as independent variable and mother and father attachment scores as dependent variables. The models fulfilled necessary conditions and explained 4%, for mothers ($R^2 = .04, F(1,122) = 4.77, p = .03$), and 7% for fathers ($R^2 = .07, F(1,122) = 8.89, p = .00$) of the variance of the attachment scores. Participants who have parents that do not live in a marriage or non-marital partnerships have a higher probability to evaluate their relationships with their parents as less positive for both mothers and fathers, acknowledging that this relation is more salient for the adolescent-father relationship, as possible to verify in table 4.

Table 3.4

Regression analysis summary for civil status predicting parental attachment scores

Dependent variable	B	t	p
Mother attachment	-.45	-2.18	.03
Father attachment	-.77	-2.98	.00

3.2. Parent and peer attachment and behavioral problems

To further analyze the relation between attachment scores and behavior scores was computed a two-step cluster analysis with three predictors: mother, father and peer attachment. The found model contains three clusters and a fair cluster quality. The ratio of the largest to smallest cluster was 1.89, the largest cluster containing 66 subjects and the smallest cluster 35. As is possible to see in figure 1, the first group - High attachment scores, contains subjects who presented high scores for all three attachment figures. The second and medium sized group, called group – Medium attachment scores, is formed of subjects with medium scores for all three attachments and the last and smallest group, group – Low-High attachment scores, is represented by subjects with low parent attachment scores and high peer attachment scores.

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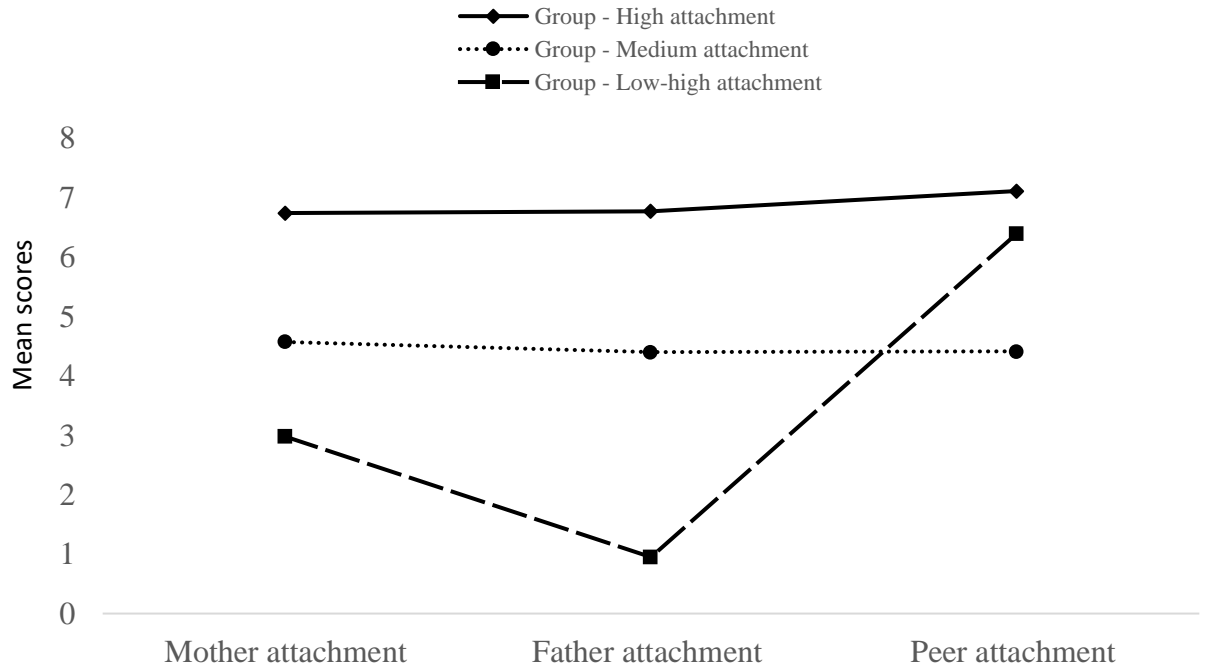


Figure 3.1. *Mean score profiles for attachment measures*

As is possible to see in table 4, in the group – High attachment, mean scores for mother, father and peer attachment were higher than overall mean attachment scores and peer attachment scores were the highest. In the group – Medium attachment, scores for all attachment figures were lower than the overall mean scores and very similar one to another. In group – Low-high attachment, on one hand, father attachment scores were the lowest, followed by mother attachment scores, on the other hand, peer attachment scores are similar to the overall mean score.

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Table 3.5.

Between groups differences for mother, father and peer attachment

Measure	Group 1 (n=66)		Group 2 (n=49)		Group 3 (n=35)	
	M	SD	M	SD	M	SD
Mother attachment	6.74	1.20	4.57	1.08	2.98	2.02
Father attachment	6.77	1.22	4.40	.99	.95	2.08
Peer attachment	7.11	.95	4.41	1.10	6.39	1.14

Descriptive statistics were run for outcome variables in each cluster individually. Group High attachment presented the highest mean values for mother, father and peer attachment, and lowest scores for internalization, externalization and total YSR scores as shown in table 5. Group – Medium attachment shows internalization, externalization and total YSR scores that are neither very high, nor very low but below the overall mean, compared with the other two clusters. Group – Low-high attachment presents internalization, Externalization and total YSR scores that are the highest of all three clusters.

Table 3.6

Between group differences for behavioral problems

Measure	Cluster 1 (n=66)		Cluster 2 (n=49)		Cluster 3 (n=35)	
	M	SD	M	SD	M	SD
Internalization	.39	.23	.60	.27	.69	.24
Externalization	.34	.20	.47	.23	.52	.17
Total YSR	.40	.24	.56	.21	.60	.15

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Frequency statistics were run in order to obtain percentages of the parental civil statuses for each cluster. In both clusters with high and medium attachment scores (Cluster 1 & 2) the percentage of participants with married parents showed a clear majority and similar numbers for both clusters. On the contrary, for the cluster with low and high attachment scores, the percentage of divorced parents was bigger than those living in a marriage, this cluster shows as well the highest percentage of single or widowed mothers and participants living in other family concepts.

Table 3.7
Percentages of parental civil status

Civil status	Cluster 1	Cluster 2	Cluster 3
Married/non-marital partnership	72.1 %	73.8%	35.5%
Divorced	16.4%	23.8%	41.9%
Widow	1.6%	-	3.2%
Single mother	1.6%	-	3.2%
Other	8.2%	2.4%	16.1%

After the cluster analysis the condition of being in one of three clusters was used as the independent variable in two analysis of variance (ANOVA) to test mean differences in YSR and attachment scores. Statistically significant differences were found for internalizing problems ($F(2,131) = 18.228, p < .001$), as well as externalizing problems ($F(2,131) = 9.456, p < .001$) and between all attachment scores throughout the clusters.

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Table 3.8

One-way analysis of variance for the effects of the Clusters on Internalization and Externalization

Variable and source		SS	MS	F (2,131)	P<.001	η^2
IPPA	Mother attachment					
	Between	302.38	151.19	77.12	<.001	.54
	Within	256.82	1.96			
	Father attachment					
	Between	703.48	351.74	177.58	<.001	.73
	Within	259.49	1.98			
	Peer attachment					
	Between	185.01	92.51	84.97	<.001	.57
	Within	142.61	1.09			
YSR	Internalization					
	Between	2.18	1.09	18.23	<.001	.22
	Within	7.82	.06			
	Externalization					
	Between	.78	.39	9.46	<.001	.13
	Within	5.40	.04			

Through a post-hoc test it was found that the differences are statistically significant between the first cluster, of high overall attachment, and the second and third cluster, but not in-between the second and third cluster. This was found for externalizing ($p = .010$, $p = .001$) as well as for internalizing problems ($p < .001$).

IV. Discussion

The presented study aims to further investigate the nature of parent and peer attachment during adolescence, the link between parent and peer attachment, as well as its outcomes, internalizing and externalizing behavior. It is one goal to identify different groups of adolescents based on their perception of the relationships with their mothers, fathers and peers. We investigated further, if there exist significant differences in between the found groups regarding externalizing and internalizing behavior.

Outcome descriptive statistics for overall attachment scores in the presented study can be interpreted to underline what was mentioned in literature: Adolescents start putting their peers on top of their attachment hierarchies and mothers continue to have a higher probability to stay on top than fathers. Mean peer attachment scores are the highest, followed by mother and then father attachment scores. Given that attachment is evaluated based on self-evaluation questionnaire it is possible to suggest that the adolescents perceive themselves to be closest to their peers. A reason for fathers to not be the preferred attachment figures during adolescence may be perceived availability. Girls especially seem to feel that their fathers are less available during adolescence, than they perceived during middle childhood until early adolescence (Rosenthal & Kobak, 2010). Males tend to feel less attached to their fathers as they mature, while they perceive themselves to be closer to their mothers (Papini, Roggman, & Anderson, 1991).

The correlation between gender and internalizing behavior manifests through an increased probability for higher internalizing scores in females. This finding is similar to other literature; Matos et al. (2017) found internalizing problems generally occur more

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frequently in adolescent girls and like this identified gender as a moderating variable for behavior. Similar to our results, Matos et al. (2017) found small effect sizes, implicating a cautious interpretation of this relation. An explanation may be found in society and a tendency to raise girls towards over-controlling rather than under-controlling behavior (Keenan & Shaw, 1997). But as well, Ara (2016) showed that it is possible for male internalizing problems to be misidentified as externalizing, as boys tend to manifest internalizing problems through aggression or hostility.

The regression for age and externalizing scores in the current study is significant, but with a small effect size of 3%. Those 3 percent may be explained by individual differences inside the sample, and with externalizing behavior being much more common as part of adolescent behavior patterns. It is possible for the older participants to manifest more externalizing behavior, such as consumption of alcohol, tobacco and other drugs, which are frequently a part of adolescence (Arnett & Hughes, 2012).

Regarding the negative relation found in this study between parental civil status and parental attachment scores, it is possible to identify divorce as an influencing factor for attachment. The results make it possible to say that participants whose parents do not live in a marriage or partnership have a higher probability of perceiving their relationships to both parents as less positive. According to the literature it is common for parental bonds to weaken after a divorce, especially the relationship to one's father gets more affected. Adolescents feel closer to their mothers and more distant to fathers, often due to custody regulations, as most children of divorced parents live mostly with their mothers (Bulduc, Caron, & Logue, 2007; Riggio, 2004). Civil status shows a higher effect on father attachment than mother

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attachment scores in this sample, providing supporting evidence for the assumption that more adolescents with divorced parents experience lower quality paternal relationships.

The overall results in the current study underline Bowlby's theory that attachment representations gained through experiences with mothers and fathers may influence future attachment relationships with peers. The results found regarding parent and peer attachment suggest as well, that there exists a correlation between one and the other. During the analysis, the sample was distributed into three clusters based on attachment profiles. All three groups differed in size from each other. The two bigger groups present similar scores for all three attachment figures, mother, father and peers, while the smallest group presents lower scores for mother and father and higher peer attachment scores. Group – High attachment, is the biggest with 61 subjects, followed by the Group - Medium attachment (42) and the group-Low-High attachment with 25 subjects. These numbers can be justified looking at already existing literature, the biggest group represents the majority of adolescents. It is not surprising to find one or two groups with significantly bigger sizes, given that the majority of studies in the United States and Europe found higher numbers for secure attached children than for any other attachment classifications. Even in studies with clinical samples, secure attached children represent up to 80% of each sample (Grossmann & Grossmann, 2006). The second group shows less secure, but not yet maladaptive attachment scores towards their parents. So, this group represents a smaller group of adolescents, without being a minority. Luckily the possibility for an adolescent to manifest maladaptive attachment patterns are lower, represented by the small number of subjects in the third group. The attachment patterns found in the smallest group are possibly maladaptive (Rosenthal & Kobak, 2010). The third group – Low-High attachment hints towards the theory, that some teenagers may distance

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themselves from their primary attachment figures for different reasons and can find secure, compensatory attachment relationships with peers (Grossmann & Grossmann, 2006).

The first and second cluster can be interpreted as evidence for the established theory, that attachment security to one's primary attachment figures will influence future relationships (J. P. Allen & Tan, 2016; Kerns & Stevens, 1996). The presented findings propose as well, that the already existing relationships with the parents don't lose their importance, but that parent and peer attachment relationship coexist during adolescence. As already mentioned in the analysis of overall attachment scores, the significantly higher scores for peer can be interpreted as an indicator that peer relationships assume the first place in adolescent attachment hierarchies, at least in non-emergency situations (Rosenthal & Kobak, 2010).

It is normal for adolescents to build attachment relationships with peers, but according to the attachment theory, the quality of these attachment relationships is supposed to reflect the attachment patterns experienced with both parents. Furthermore, children with maladaptive and or negative attachment experiences should feel more difficulties in making friends and maintaining healthy friendships, since primary attachment relationships function as training grounds. If primary attachment relationships do not transmit trust in others and teach social interactions, it will be hard for any adolescent to build positive and functioning relationships, as they are likely to reproduce what they experienced in their primary attachment relationships (K. Grossmann & Grossmann, 2006; Marsh, McFarland, Allen, Boykin, & Land, 2007). The third group- Low- High attachment seems to contradict this assumption, as attachment scores for both mothers and fathers are very low and attachment

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scores for peers are around the same value as the samples average. There can be formed two explanatory hypotheses about how this could happen.

First, there has been a theory that adolescents who experience poor, negative or even nonexistent relationships with mothers and fathers, may turn to their peers in an attempt to compensate what is missing (Rosenthal & Kobak, 2010). After in-group analysis of all clusters we found that the majority of this group are children whose parents were not married or living in a partnership. This and other possible factors may have contributed to adolescents feeling little attachment towards their parents. Father attachment scores were lowest, possibly due to parental civil status, as paternal relationships are more affected by divorce than maternal relationships (Bulduc et al., 2007; Riggio, 2004). Both male and female adolescents seem to distance themselves more from their fathers, during their period of maturation, than their mothers. The emotional distancing hypothesis may be part of the explanation as well, according to which adolescents are supposed to feel less attached to mothers and fathers as they mature (Papini et al., 1991).

Nevertheless, there is another option to why peer attachment scores are high, while parental attachment scores are lower. The study was conducted using a self-evaluation questionnaire, which come with a risk of being influenced by social desirability. But not only is it possible for adolescents to not want to disclose the true nature of their peer relationships out of social pressure, there exists evidence that especially insecure-avoidant and insecure-ambivalent attached children, when asked about their friends, they either do not have any or have a tendency to exacerbate the number and quality of their peer relationships (K. Grossmann & Grossmann, 2006).

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Another goal of this study is to examine associations between perceived adolescent attachment and behavioral problems, specifically internalizing and externalizing behavior. Consistent with previous studies, this sample shows a negative relation between secure attachment and internalizing and externalizing behavior. Although this may only be true for parental attachment. We found that both groups with lower attachment scores for parents, show significantly higher externalizing and internalizing scores. Assuming adolescent peer attachment relationships to be full attachment relationships it would mean that these relationships inherit an influence on adolescent behavioral problems and social adjustment (Zeifman & Hazan, 2016). This is not confirmed, analyzing the third group - Low-High attachment. If peer attachment relationships were to have the same effect on adolescent social adjustment, it would be expected for highly attached adolescents to show fewer behavioral problems than a group that does not feel very close nor very distant from both parents and peers. On the contrary, the group – Low-High attachment has the highest scores for internalizing and externalizing behavior. Similar results have been found by Rosenthal and Kobak (2010), who found adolescents that included peers as primary attachment figures to be in greater risk for internalizing and externalizing problems. It could be possible that peer attachment relationships don't serve all the same functions, or other functions, as parent attachment relationships in terms of social adjustment and therefore fail to predict it (Furman, 2001; Laible, Carlo and Raffaelli, 2000). In this sample only students with high attachment scores for all three figures, mother, father and peers, show significantly lower internalizing and externalizing behavior.

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As mentioned above, all measures of this study were self-reports, which bear in themselves a limitation due to social desirability. It is possible for participants to not be completely open about their perceptions of themselves out of preoccupation of being judged. But it is also possible for participants to not disclose everything, just because they may not be aware of some aspects of their behavior. For future research it would be interesting to include measures of outside assessment from parents, peers and other persons like teachers, to get the possibility to analyze both behavior and adolescents' relationships from a more objective perspective. Although self-report measures have been used frequently and have been shown to be a way to gain access to people's perceptions.

This current sample limits generalizability of the findings to fairly similar samples with a high percentage of male participants, that had already repeated a school year and frequented a professional course rather than pursuing a general high school degree. As such this sample may not be the most representative sample of the Portuguese adolescent population, so for further investigations would be important to control the social and economic situations of participants. Findings could possibly be different for more diverse samples. There have been studies conducted in middle, lower and upper class samples, revealing social economic factors to be influencing on adolescent attachment as well as behavioral problems (Hopf, 2005).

The presented findings are able to verify the relation between parent and peer attachment during adolescents, while showing where there is more to explore. Parent attachment does predict adolescent peer attachment, until a certain point. Is it possible for peer attachment relationships to compensate poor parental relationships or is it predictable

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that insecure attached adolescents will not be able to build equally satisfying relationships as their secure attached peers? Besides the relation between parent and peer attachment it was possible to see a negative effect of secure attachment on behavioral problems, sustaining the idea that it is possible to improve the quality of attachment relationships in order to have a positive impact on adolescents' social adjustment.

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Appendix

Appendix A – Informed Consent



Exmo. Encarregado de educação

O meu nome é Sara Carolin Coelho Brandes, e sou aluna do Mestrado de Psicologia Comunitária e Proteção de Crianças e Jovens em Risco, no ISCTE-IUL.

Venho por este meio solicitar a sua colaboração para a realização da minha tese de Mestrado, sob a orientação Professora Lígia Monteiro, professora auxiliar no ISCTE-IUL, e investigadora no CIS-IUL, e que analisa as relações sociais dos adolescentes e a perceção que estes têm sobre os seus comportamentos.

Este estudo será realizado por mim e implica os seguintes procedimentos:

- 1) Preenchimento do consentimento e, caso autoriza a participação no estudo, o preenchimento de um breve questionário de caracterização sociodemográfico por si. O questionário está anexado a esta carta.
- 2) O preenchimento de dois questionários pelos jovens, que levará aproximadamente 45 minutos, decorrendo em contexto de sala de aula. Acrescente-se que, apenas os jovens que tiverem autorização dos pais e que eles próprios aceitem participar, preencherão os questionários.

Todos os dados deste estudo são confidenciais, sendo divulgados apenas resultados globais e atribuído um código a cada jovem.

Caso tenha questões a colocar estamos disponíveis para qualquer esclarecimento, presencialmente, ou via email: scbs@iscte-iul.pt ou Ligia.Monteiro@iscte-iul.pt.

Agradeço a sua atenção,

(Sara Brandes)

CONSENTIMENTO

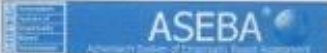

Eu, encarregado de educação de _____, aluno do ____ ano, da turma ____, nº _____, declaro que fui informado e compreendo os objetivos do presente estudo e autorizo / não autorizo (*riscar o que **não** se aplica*) o meu educando/a minha educanda a participar no referido estudo.

Encarregado de educação: _____

A devolver ao diretor de turma até dia X de Novembro 2017

NOTA: no caso de não devolver o presente consentimento consideramos que não autoriza a sua educanda/o seu educando a participar no referido projeto.

Appendix B – Questionnaire

 	
<p>Segue-se uma lista de frases que descrevem características de rapazes e raparigas. Lê cada uma delas e indica até que ponto elas descrevem a maneira como tu és ou tens sido durante os últimos 6 meses. Por favor, responde a todas as descrições o melhor que possas, mesmo que algumas pareçam não se aplicar exatamente. Assinala/circunda no 2 se a afirmação é MUITO VERDADEIRA ou MUITAS VEZES VERDADEIRA em relação a ti; assinala/circunda no 1 se a afirmação é DE ALGUMA FORMA OU ALGUMAS VEZES VERDADEIRA; Se a afirmação NÃO FOR VERDADEIRA, assinala/circunda no 0. SUBLINHA QUALQUER UMA QUE TE PREOCUPE.</p>	
<p>0 = Não é verdadeira 1 = De alguma forma ou algumas vezes verdadeira 2 = Muito verdadeira ou muitas vezes verdadeira</p>	
0 1 2	1. Comporto-me de uma maneira demasiado infantil para a minha idade
0 1 2	2. Consumo álcool sem o consentimento dos meus pais (descreve)
0 1 2	3. Discuto muito
0 1 2	4. Não consigo acabar as coisas que começo
0 1 2	5. Não há muitas coisas de que goste
0 1 2	6. Gosto de animais
0 1 2	7. Sou fanfarrão ou gabarola
0 1 2	8. Não consigo concentrar-me, não consigo estar atento(a) durante muito tempo
0 1 2	9. Não consigo afastar certas ideias do pensamento; obsessões ou cismas (descreve)
0 1 2	10. Não sou capaz de ficar sentado(a) sossegado(a) ou quieto(a)
0 1 2	11. Sou demasiado dependente dos adultos
0 1 2	12. Sinto-me só
0 1 2	13. Sinto-me confuso(a), desorientado(a) ou como se estivesse num nevoeiro
0 1 2	14. Choro muito
0 1 2	15. Sou muito honesto(a)
0 1 2	16. Sou mau/má para as outras pessoas
0 1 2	17. Sonho muitas vezes acordado(a)
0 1 2	18. Magoo-me de propósito ou já tentei matar-me
0 1 2	19. Tento que me deem muita atenção
0 1 2	20. Destruo as minhas coisas
0 1 2	21. Destruo coisas da minha família ou de colegas
0 1 2	22. Desobedeço aos meus pais
0 1 2	23. Sou desobediente na escola
0 1 2	24. Não como tão bem como devia
0 1 2	25. Não me dou bem com os outros jovens
0 1 2	26. Não me sinto culpado(a) depois de fazer alguma coisa que não devia
0 1 2	27. Tenho ciúmes dos outros ou sou invejoso(a)
0 1 2	28. Quebro as regras em casa, na escola ou noutras locais
0 1 2	29. Tenho medo de determinados animais, situações ou lugares, sem incluir a escola (descreve)
0 1 2	30. Tenho medo de ir para a escola
0 1 2	31. Tenho medo de pensar ou fazer qualquer coisa de mal
0 1 2	32. Sinto que tenho de ser perfeito(a)
0 1 2	33. Sinto que ninguém gosta de mim
0 1 2	34. Sinto que os outros andam atrás de mim para me apanhar; sinto-me perseguido(a)
0 1 2	35. Sinto-me sem valor ou inferior aos outros
0 1 2	36. Magoo-me muito em acidentes
0 1 2	37. Meto-me em muitas lutas/brigas
0 1 2	38. Fazem pouco de mim frequentemente
0 1 2	39. Ando com rapazes ou raparigas que se metem em sarilhos
0 1 2	40. Ouço sons ou vozes que não existem (descreve)
0 1 2	41. Ajo sem pensar; sou impulsivo(a)
0 1 2	42. Gosto mais de estar sozinho(a) do que acompanhado(a)
0 1 2	43. Minto ou faço batota
0 1 2	44. Roo as unhas
0 1 2	45. Sou nervoso(a), irritável ou tenso(a)
0 1 2	46. Tenho tiques ou movimentos nervosos nalgumas partes do corpo (descreve)
0 1 2	47. Tenho pesadelos
0 1 2	48. Os outros rapazes ou raparigas não gostam de mim
0 1 2	49. Sou capaz de fazer algumas coisas melhor do que a maior parte dos rapazes ou raparigas
0 1 2	50. Sou demasiado medroso(a) ou ansioso(a)
0 1 2	51. Tenho tonturas
0 1 2	52. Sinto-me demasiado culpado(a)
0 1 2	53. Como demasiado
0 1 2	54. Sinto-me excessivamente cansado(a)
0 1 2	55. Tenho peso a mais
0 1 2	56. Tenho problemas físicos <u>sem</u> causa médica conhecida:
0 1 2	a. Dores (sem ser dores de cabeça ou de barriga)
0 1 2	b. Dores de cabeça
0 1 2	c. Náuseas, enjoos
0 1 2	d. Problemas com a vista (não incluindo problemas corrigidos por óculos ou lentes de contacto) (descreve)
0 1 2	e. Irritações de pele/borbulhas ou outros problemas de pele
0 1 2	f. Dores de estômago ou cólicas
0 1 2	g. Vômitos
0 1 2	h. Outros problemas (descreve)
0 1 2	57. Agrido fisicamente outras pessoas
0 1 2	58. Arranco coisas da pele ou de outras partes do corpo (descreve)
0 1 2	59. Posso ser muito amigável
0 1 2	60. Gosto de experimentar coisas ou situações novas
0 1 2	61. O meu trabalho escolar é fraco
0 1 2	62. Tenho má coordenação, sou desajeitado(a) ou desastrado(a)
0 1 2	63. Prefiro andar com rapazes ou raparigas mais velhos(as) do que eu
0 1 2	64. Prefiro andar com rapazes ou raparigas mais novos(as) do que eu
0 1 2	65. Recuso-me a falar
0 1 2	66. Repito várias vezes e com insistência as mesmas ações ou gestos; tenho compulsões (descreve)
<p>DIREITOS RESERVADOS DE ACORDO COM A LEGISLAÇÃO EM VIGOR. ESTE QUESTIONÁRIO NÃO PODE SER REPRODUZIDO POR TODOS E QUAISQUER MEIOS, INDEPENDENTEMENTE DOS MOTIVOS E OBJETIVOS (INCLUINDO ACADEMICOS, CONSULTAS, INVESTIGAÇÃO), SENDO IGUALMENTE NÃO AUTORIZADO O ARQUIVAMENTO EM QUALQUER SISTEMA OU BASE DE DADOS. CASO ESTE QUESTIONÁRIO NÃO ESTEJA ESCRITO A AZUL, ESTÁ PERANTE UMA CÓPIA NÃO AUTORIZADA, O QUE CONSTITUI UMA ILICITUDE À LUZ DA LEI PORTUGUESA.</p>	

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IPPA-R – Escala de Vinculação aos Pais

(Figueiredo, T. C. & Machado, T. S., 2008; Versão Portuguesa do “Inventory for Parent and Peer Attachment”; Armsden & Greenberg, 1987).

Por favor lê com atenção cada uma das afirmações que se seguem e assinala o grau em que cada uma descreve a forma como te sentes **em relação aos teus pais** (_____ Pai _____). Não existem respostas certas ou erradas, **responde de acordo com o que geralmente sentes**.

1 = Nunca verdadeira
2 = Poucas vezes verdadeira
3 = Algumas vezes verdadeira
4 = Muitas vezes verdadeira
5 = Sempre verdadeira

Idade: _____ Sexo _____

1. Os meus pais respeitam os meus sentimentos.	1	2	3	4	5
2. Penso que os meus pais são uns bons pais.	1	2	3	4	5
3. Eu gostava de ter outros pais.	1	2	3	4	5
4. Os meus pais aceitam-me tal como eu sou.	1	2	3	4	5
5. Eu gosto de pedir a opinião dos meus pais acerca das coisas que me preocupam.	1	2	3	4	5
6. Não vale a pena mostrar os meus sentimentos junto dos meus pais.	1	2	3	4	5
7. Os meus pais conseguem notar quando estou preocupado com alguma coisa.	1	2	3	4	5
8. Eu sinto-me envergonhado ou ridículo quando falo dos meus problemas com os meus pais.	1	2	3	4	5
9. Os meus pais esperam demasiado de mim.	1	2	3	4	5
10. Irrito-me facilmente com os meus pais.	1	2	3	4	5
11. Eu fico irritado mais vezes do que os meus pais dão conta.	1	2	3	4	5
12. Quando conversamos sobre algum assunto, os meus pais valorizam a minha opinião.	1	2	3	4	5
13. Os meus pais confiam nas minhas decisões.	1	2	3	4	5
14. Os meus pais já têm os seus problemas, por isso eu não os incomodo com os meus.	1	2	3	4	5
15. Os meus pais ajudam-me a compreender-me melhor.	1	2	3	4	5
16. Eu conto aos meus pais os meus problemas e preocupações.	1	2	3	4	5
17. Eu sinto-me zangado com os meus pais.	1	2	3	4	5
18. Eu não recebo muita atenção dos meus pais.	1	2	3	4	5
19. Os meus pais ajudam-me a falar das minhas preocupações.	1	2	3	4	5
20. Os meus pais compreendem-me.	1	2	3	4	5
21. Quando estou zangado com alguma coisa, os meus pais procuram ser compreensivos.	1	2	3	4	5
22. Eu confio nos meus pais.	1	2	3	4	5
23. Os meus pais não entendem o que estou a passar agora.	1	2	3	4	5
24. Eu posso contar com os meus pais quando preciso de desabafar.	1	2	3	4	5
25. Se os meus pais sabem que algo me está a preocupar, eles perguntam-me o que se passa.	1	2	3	4	5

Investigadora responsável: Teresa Sousa Machado, FPCE-UC – tmachado@fpce.uc.pt

Agradecemos desde já a sua colaboração e tempo dispensado. Este questionário, cujos dados são **confidenciais**, ajuda-nos a caracterizar os participantes do estudo. Solicitamos que, caso autorize a participação no estudo, junte o questionário preenchido, ao consentimento, e os coloque no envelope anexado, e que o seu filho/a o devolverá na escola.

Obrigada pela sua colaboração!

Caracterização dos pais

1. Idade dos pais.

Mãe ____

Pai ____

2. Nacionalidade dos pais.

Mãe _____

Pai _____

3. Estado Civil.

Casados ou União de facto

Divorciados ou Separados

Mãe viúva

Pai viúvo

Mãe solteira

Pai solteiro

Outra, qual _____

Se divorciados, há quanto tempo _____?

Quem tem a guarda da criança? _____

4. Número de filhos ____

5. Nível de escolaridade completado da **mãe**.

Doutoramento

Mestrado

Licenciatura

10^o a 12^o ano

7^o - 9^o ano

5^o -6^o ano

1^a – 4^a ano

Attachment in adolescence

Não sabe ler ou escrever

6. Nível de escolaridade completado do **pai**.

Doutoramento

Mestrado

Licenciatura

10^o a 12^o ano

7^o - 9^o ano

5^o -6^o ano

1^a – 4^a ano

Não sabe ler ou escrever

7. Situação profissional da **mãe**.

Trabalha a tempo inteiro

Trabalha a tempo parcial

Número de horas _____

Outra, qual _____

8. Situação profissional do **pai**.

Trabalha a tempo inteiro

Trabalha a tempo parcial

Número de horas _____

Outra, qual _____

9. Proveniências dos Rendimentos da **mãe**.

Trabalho (salário mensal)

Rendimento social de inserção

Subsídio de desemprego

Outros _____

10. Proveniência dos rendimentos do **pai**.

Trabalho (salário mensal)

Rendimento social de inserção

Subsídio de desemprego

Outros _____

Caracterização do jovem:

11. Idade ____

Attachment in adolescence

12. Sexo

F M

13. Nacionalidade. _____

14. Ano escolar que frequenta _____

15. O jovem vive com quem? _____