Attachment and Autonomy Problems

in Adults with ADHD

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Abstract

Objective: The present study examined attachment security and autonomy problems in 84 late-diagnosed adults with ADHD. High insecure attachment and autonomy problems were anticipated and expected to be negatively associated with general psychological functioning.

Method: Three self-report questionnaires were administered (RQ, ACS-30 and BSI) and demographic information was collected. Results: Only 18 percent of participants was securely attached, as opposed to 59 percent in the normal population. Concerning autonomy, participants had lower self-awareness, higher sensitivity to others and equal capacity to manage new situations compared to the normal population. Preoccupiedly attached individuals with ADHD reported more problems in psychological functioning than the secure and dismissive group. Sensitivity to others and capacity to manage new situations were indeed found to correlate with psychological functioning, self-awareness did not. Attachment security and autonomy contributed separately to general psychological functioning.

Conclusion: Attachment and autonomy problems do exist in adults with ADHD and contribute negatively to their psychological functioning. Implications for treatment were suggested.

Keywords: Adult attention-deficit/hyperactivity disorder, ADHD, attachment, autonomy, self-awareness, sensitivity to others, capacity to manage new situations
Attachment and autonomy problems in adults with ADHD

Attention-deficit/hyperactivity disorder (ADHD) is still a very much under-diagnosed condition in adults (Filipe, 2009; Simon, Czobor, Bálint, Mészáros & Bitter, 2009). One of the reasons why diagnosing ADHD is difficult is insensitivity of the DSM-IV criteria to the development of the disorder across the lifespan. Recent years various researchers (Faraone, Biederman & Mick, 2006a; Kooij et al. 2005; Miller, Nigg & Faraone, 2007) try to improve these criteria for adults. Another reason for under-diagnosis of ADHD is the fact that comorbidity is the rule, rather than the exception (Kooij, Ackerlin & Buitelaar, 2001; Spencer, Biederman & Mick, 2007). Around 80 percent of patients with ADHD have one or more additional disorders, like mood and anxiety disorders, personality disorders and substance use/dependence disorders (Fischer et al., 2007; Mc. Gough et al., 2005). The majority of cases of adult ADHD remains untreated although many individuals receive treatment for another disorder (Kessler et al., 2006); ADHD is thus often hidden underneath these comorbid disorders.

According to Karam et al. (2009), patients with late-onset ADHD show less severity of ADHD symptoms and lower frequency of externalizing symptoms but increased comorbidity with general anxiety disorder than patients with early-onset ADHD. They stated that symptoms of late-onset ADHD are milder, but still dysfunctional. Faraone, Kunwar, Adamson and Biederman (2009) found similar personality profiles in adults with late-onset as compared to adults with early-onset ADHD and in a neuropsychological study Faraone et al. (2006b) found similar patterns of neuropsychological dysfunction in the two groups.

The estimated prevalence of adult ADHD in the United States is between 4 and 5 percent (Kessler et al, 2007, Wilens et al., 2009); in Belgium 4 percent (De Ridder, Bruffearts, Danckaerts, Bonnewyn & Demyttenaere, 2008); and a careful estimation for The Netherlands is 2 percent (Tuithof, Ten Have, Dorsselaer & De Graaf, 2010). Between 62
percent (Wilens et al., 2009) and 82 percent (Kooij et al., 2001) of adults with ADHD meet the requirements for the combined subtype (ADHD-C): they report symptoms of both inattention and hyperactivity-impulsivity. There is strong evidence that ADHD is a neurobiological disorder, shaped by biological and environmental risk factors (Mash & Wolfe, 2010). Percentages of ADHD variance accounted for by genetic factors vary between 60 to 80 percent (Kooij, 2002), above 76 percent (Franke, Neal & Faraone, 2009) and 64 percent (Edel, Juckel and Brüne, 2010).

Many studies predict negative interactions between parental ADHD symptoms and the child’s ADHD symptoms (“similarity misfit hypothesis”) which may result in impaired rearing resources and dysfunctional parenting (Arnold, O’Leary & Edwards, 1997; Edel et al., 2010; Harvey, Danforth, McKee, Ulaszek & Friedman, 2003; Theule, Wiener, Rogers & Marton, 2010). Only one recent study, however, suggests that when both child and parent have ADHD, parenting improves (Psychogiou, Daley, Thompson & Sonuga-Barke, 2008). Other studies suggest that, in general, parents from children with ADHD have more psychiatric problems, such as depression and anxiety disorders, conduct and antisocial disorder, learning disorders, substance use disorders; more marital and family functioning problems and a more negative parenting style than parents from children without ADHD (Anastopoulos, Guevremont, Shelton & DuPaul, 1992; Barkley, Murphy & Fisher, 2008; Cunningham, 2007; Modesto-Lowe, Danforth & Brooks, 2010). Many of these studies mention the stress of raising a child with ADHD as an important contribution to these problems.

Combining all of the above, it can be concluded that parenting style and the parent-child relationship with ADHD-children can be disturbed for many reasons. This might have a negative effect on the bonding process between parent and child. Therefore, aim of present study is to measure this effect in terms of ADHD adults’ attachment style and autonomy and
the relationship with their psychological functioning. First, we will shortly discuss psychological functioning. Then we will elaborate on the concepts of attachment and autonomy in relation to ADHD which will lead us to the research questions.

**Psychological Functioning**

According to Mikulincer and Shaver (2007), it is reasonable to believe that insecure attachment predisposes people to psychological disorders. Additionally, Bekker and Belt (2006) for example, found low autonomy to be a risk factor for depression and anxiety. To be able to assess these effects, in this study the concept of psychological functioning was used as a general measure for psychological distress on one or more primary symptom dimensions: such as signs and symptoms of depression and anxiety, the experience of unwanted thoughts and actions, distress resulting from perception of bodily dysfunction (somatization) and feelings of personal inadequacy. When high enough, psychological distress in any or more of these areas can lead to various psychological problems, psychopathology and the need for therapeutic interventions (Derogatis & Melisaratos, 1983).

**Attachment and ADHD**

Bowlby (1973) defined attachment as a type of affectional bond of a child with a specific person, who is approached in times of distress. He considered the attachment relationship as a secure base which enables the individual to engage in exploration and develop and gain independence (Berry, Barrowclough & Wearden, 2007; Bowlby, 1988; Ainsworth, Blehar, Waters & Wall, 1978). As a result of the interaction between child and caregivers during infancy and childhood, young people develop mental representations of the self in relation to significant others and expectations about how others behave in social relationships. These working models would guide attention, interpretation, memory and predictions about future interpersonal interactions (Bowlby, 1973; Cassidy, 1999;
Pietromonaco & Feldman Barrett, 1997) and are similar to the construct of *schema* described within other theoretical perspectives (Feeney, Cassidy & Ramos-Marcuse, 2008).

Adults would hold working models that may be based, in part, on those developed earlier in life. However, they also incorporate experiences in later significant relationships (Carnelly, Pietromonaco & Jaffe, 1994; Hazan & Shaver, 1987; Pietromonaco & Feldman Barrett, 1997). Hazan and Shaver (1987) were the first to develop an adult attachment model. It reflected three attachment styles: secure, anxious and avoidant. Bartholomew and Horowitz (1991) expanded on this model and developed a four category attachment model, based on two dimensions: the person’s abstract image of self, which can be positive or negative, and the person’s abstract image of the other, which can be positive or negative as well (see Figure 1, Griffin & Bartholomew, 1994).

According to this model (Bartholomew and Horowitz, 1991), *securely attached people* have a positive image of themselves and of others. They see themselves as being lovable and expect others to be generally accepting and responsive. Therefore they feel comfortable with both intimacy and autonomy. People who have a sense of unworthiness (negative self image) and a positive evaluation of others, are described as *preoccupiedly attached*. These people strive for self-acceptance by trying to gain the acceptance of valued others and are preoccupied with relationships. The third attachment style is the *fearful style*, characterized by a sense of unworthiness and unlovability about oneself with the expectation that others will be untrustworthy and rejecting, leading to avoidance of close involvement with others. Finally, the *dismissive style* is represented by people who find themselves lovable and worthy but have a negative predisposition towards others. They protect themselves against disappointment by avoiding close relationships with others and maintaining a sense of independence and invulnerability.
If the parent-child relationship is disturbed, unsafe attachment of the child to one or both of their caretakers may be the result. This can affect the person into adulthood: when an event is perceived as threatening, the attachment system, thus one’s working models and action tendencies are activated (Mikulincer & Shaver, 2007). In a large nationally representative sample of more than 8000 people in the United States, Mickelson, Kessler and Shaver (1997) found 59 percent of adults to be securely attached, thus 41 percent to be insecurely attached. IJzendoorn and Bakermans-Kranenberg (1996) found the same percentage of 59 percent in meta-analysis of 16 studies on normal mothers and fathers (total N = 870). In a meta-analysis of clinical samples they found only 13 percent to be securely attached. Although these findings were based on the original model of three categories by Hazan & Shaver (1987), the same percentages for the main categories secure and insecure attachment are assumed to apply to the four category model (Bartholomew & Horowitz, 1991; Shaver & Fraley 2010).

Although some studies found that attachment style can change over a rather short period (Baldwin & Fehr, 1995; Pielage, Barelds & Gerlsma, 2006), in general, attachment style is assumed to be relatively stable over time (Bowlby, 1988, Collins & Read, 1990, Lopez & Gormly, 2002). Several studies found ADHD in children to be associated with insecurity of attachment (e.g. Clarke, Ungerer, Chahoud, Johnson & Stiefel, 2007; Erdman, 1998; Franc, Maury & Purper-Ouakil, 2009; Niederhofer, 2009; Stiefel, 1997). Some of these studies even suggest that attachment difficulties play a role in the development of (some cases of) ADHD. Because of the relative stability of attachment style over time, one might expect that an insecure attachment style will also be present in adulthood. However, attachment styles in adults with ADHD have not been studied directly yet. Therefore, the first research question was: Are adults with ADHD more insecurely attached than the normal population? As the literature suggested a complex, mostly negative, interaction between parents and
children in ADHD-families, we hypothesized that adults with ADHD would be more often insecurely attached than the normal population.

Our second research question was: **What is the relationship between attachment and general psychological functioning of adults with ADHD?** We hypothesized that adults with ADHD who are insecurely attached would report more problems in psychological functioning than adults with ADHD who are more securely attached.

**Autonomy and ADHD**

Secure attachment sets the stage for a healthy development of the individual, resulting in autonomous adults. Insecure attachment, however, generates autonomy problems (Bowlby, 1969). Bekker and Van Assen (2006) broadened the concept of autonomy into “autonomy-connectedness”, reflecting that autonomy not only reflects independence but also incorporates the ability to initiate and maintain meaningful relationships with others. In this study the shorter term “autonomy” will be used, but the underlying definition will be theirs. The concept has three components: self-awareness, sensitivity to others and capacity for managing new situations. **Self-awareness** is the capacity to be aware of one’s own opinions, wishes and needs and the capacity to express these in social situations. **Sensitivity to others** is defined as sensitivity to the opinions, wishes and needs of other people; empathy; and capacity and need for intimacy and separation. **Capacity for managing new situations** reflects (un-)easy feelings in new situations, flexibility, an inclination to exploration, and dependence on familiar structures. A person with poor autonomy will have little self-awareness and capacity for managing new situations and a relatively high or low sensitivity to others. An autonomous person will be self-aware, capable of managing new situations and optimally sensitive to others.

No studies have been found that specifically describe self-awareness in adults with ADHD, several studies examine slightly different concepts. From a neurobiological point of
view, Beitman and Nair (2005) found that people who suffer from psychiatric disorders like schizophrenia, autism or ADHD have a self-awareness deficit. Rucklidge, Brown, Crawford and Kaplan (2007) reported that adults with ADHD, compared to controls, have a more external locus of control. Extrapolating from these studies, we expected self-awareness in people with ADHD to be lower than in normals.

For sensitivity to others, the same is true as for self-awareness: studies only provided indirect information and used slightly different terminology. Nonetheless, together they gave us some insight in sensitivity to others for ADHD adults. For example, Friedman et al. (2003) stated that adults with ADHD view themselves as less socially competent but more sensitive toward violations of social norms than controls. Kohls, Herpertz-Dahlman and Konrad (2009) found that children and adolescents with ADHD display a higher profit from social reward than healthy controls. They concluded that people with ADHD are hyper responsive to social rewards, which is accompanied by limited self-awareness. Barkley et al. (2008), mentioned three studies that all found adults with ADHD to score higher on the subscale interpersonal sensitivity of the Symptoms Check List-90 than a clinical or normal control sample. Rapport, Friedman, Tzelepis and Van Voorhis (2002), however, took another view on this subject and came to a different conclusion. They found that adults with ADHD experience their own emotions with greater intensity than adults without the disorder and concluded that this disrupts their ability to be sensitive to the emotions of others. Nonetheless, in this study we expected adults with ADHD to be more sensitive to others than the normal population.

Concerning the capacity to manage new situations, several studies indicated that children with ADHD are less securely attached than children without ADHD, suggesting they would feel less confident in exploring the world around them thus have more problems managing new situations. Supportive to this view is the fact that, in general, adults with ADHD tend to have a low sense of self-efficacy (e.g. Bramham et al., 2009). Additionally,
Although ADHD symptoms like impulsivity and hyperactivity might initially lower the threshold to engage in new situations, they might eventually hamper their capacity to successfully manage them.

At this point the third research question was raised: Do adults with ADHD have more autonomy problems than the normal population? It was hypothesized that adults with ADHD would be less self-aware, more sensitive to others and less capable of managing new situations than people without ADHD. The fourth research question followed logically: What is the relationship between autonomy and general psychological functioning in adults with ADHD? Bekker and Belt (2006) and Bekker and Croon (2010) found a negative relationship between autonomy and depression and anxiety. This supports the hypothesis of a positive relationship between autonomy and psychological functioning.

Attachment, Autonomy and ADHD

One study found a strong relation between attachment and autonomy but also found the two concepts not to be confounded (Bekker & Croon, 2010). This would mean that, in addition to attachment, autonomy develops from other factors as well. For example, biological factors and gender role socialization might play a role (Bekker & van Assen, 2008). This led us to the question how much attachment and autonomy contribute separately to a person’s psychological wellbeing. Therefore the fifth and last research question was: How much of the variance in reported general symptoms in adults with ADHD can be explained by attachment and how much by autonomy? It was hypothesized that autonomy contributes to general psychological functioning over and above attachment.

Method

Participants and Procedure

Adults were selected who recently received a diagnosis for ADHD. To rule out subtype differences, a further selection was made by selecting people of the combined
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subtype. To minimize influences caused by treatment, participants were selected who did not start treatment yet, or who were in the beginning phase of treatment at the participating institution. Furthermore, participants were excluded in case of a comorbid disorder in the autistic spectrum since both attachment and autonomy might be strongly influenced by this disorder.

Patients were recruited from mental health institutions in the cities of Eindhoven, Tilburg, The Hague and Roermond in The Netherlands. Additionally two general hospitals, in Hengelo and Geldrop, participated in this study. Diagnoses were made by authorized professionals according to the protocol of the institution. Participants were asked to fill out three questionnaires and provide some demographic information as well. The questionnaires were collected at the institution or participants were provided with a stamped and addressed return envelope to return the information. All information remained anonymous. Fifty four of the participants were acquired in Eindhoven in 2010 by Van Vroenhoven (2010). Additionally, 30 were collected in the other cities in 2011 by the author of this article. Demographic information can be found in Table 1.

Measures

By means of a short questionnaire respondents provided demographic information: sex, age, marital status and level of education. Marital status was divided into four categories: single, relationship without living together, relationship and living together, married. Level of education consisted of three categories: low (containing elementary education, LTS, ITO, LBO, LHO), average (MAVO, MBO, MTS) and high (HAVO, HBO, VWO, WO).

To measure attachment style, the Relationship Questionnaire (Bartholomew & Horowitz, 1991) was used; a self-report questionnaire which is partly forced-choice. All four attachment styles (secure, preoccupied, fearful and dismissive) were shortly described and participants had to choose the style that fits them best. Additionally they had to rate each style
on a seven-point Likert scale from “not at all applicable to me” to “totally applicable to me”. Although the RQ is a very short questionnaire, its reliability and validity are good (Ravitz, Maunder, Hunter, Sthankiya & Lancee, 2010).

The Autonomy-Connectedness Scale (ACS-30), developed by Bekker in 2005, was used to measure the three components of autonomy: self-awareness, sensitivity to others and capacity to manage new situations. This self-report questionnaire consists of 30 questions which had to be rated on a five-point Likert scale from “not at all applicable to me” to “totally applicable to me”. According to Cotan the ACS-30 is a valid instrument. Bekker and Van Assen (2006) found Cronbach’s alpha’s in the low 0.8s for all three subscales.

The Brief Symptom Inventory (BSI; Derogatis, 1975, 1983), used to measure psychological functioning, is a self-report questionnaire that consists of 55 items that had to be rated on a five-point Likert scale from “not at all” to “extremely”. The BSI has nine subscales: somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation and psychoticism and a total score, the global severity index. According to Beurs and Zitman (2006) and Beurs (2010) all subscales have high internal consistency (Cronbach’s alpha’s between .71 and .87) and the reliability of the total scale is 0.96. Reliability results of this study can be found in Table 4.

Results

The statistical analyses were performed in SPSS 16.0. Prior to the analyses all assumptions were checked. Two of the three autonomy scales were found to be normally distributed: self-awareness and sensitivity to others. Capacity to manage new situations had to be transformed (square root) in order to be normally distributed. Age and total score on the scale of problems in psychological functioning (BSI) were normally distributed as well. Additionally, one subscale of the BSI was normally distributed and three subscales could be transformed to be normally distributed (see Table 4). The transformed scores were used in all
analyses where a normal distribution of scores was assumed. Chi-square tests for independence between the descriptive variables revealed a statistically significant association between sex and level of education with men reporting a higher level of education than women, \( \chi^2 (2, N = 84) = 6.28, p = .04, \phi = .27 \). Where necessary, we examined this relationship in further analyses.

**Attachment style and ADHD**

The first hypothesis stated that adults with ADHD are more frequently insecurely attached than the normal population. As mentioned before, in several studies 41 percent of adults was found to be insecurely attached. In our sample, 82 percent was insecurely attached (see Table 2), twice as many people as in the normal population. The difference was statistically significant \( \chi^2 (1, N = 83) = 57.59, p < .000 \). A chi-square test for independence showed no association between attachment style and gender, \( \chi^2 (3, N = 81) = 5.58, p = .13, \phi = .26 \).

**Attachment Style and General Psychological Functioning**

To test the second hypothesis an analysis of variance was performed to explore the relationship between attachment style and general psychological functioning. There was a statistically significant difference at the \( p < 0.05 \) level in BSI-scores for attachment style: \( F (3, 77) = 4.55, p = .005 \). The effect size, calculated using eta squared was .15. This is a large effect (Pallant, 2007). Post-hoc comparisons using the Tukey HSD test indicated that the mean scores for the secure and dismissive group differed significantly at the \( p < .05 \) level from the preoccupied group. These two groups reported fewer problems in general psychological functioning than the preoccupied group (see Table 2).

**Autonomy and ADHD**

To test the third hypothesis, the norm data from the autonomy questionnaire (ACS-30) were used. It was concluded that, for adults with ADHD in this study, self-awareness was
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significantly lower and sensitivity to others significantly higher than the normal population (Table 3). The average capacity to manage new situations in this group did not differ significantly from the normal population. An additional one-way between-groups multivariate analysis of variance revealed no significant differences in autonomy for attachment style (Wilks’ Lambda = .061).

Autonomy and General Psychological Functioning

To test the fourth hypothesis that a positive relationship would exist between autonomy and general psychological functioning in adults with ADHD, a correlation analysis was performed between the three autonomy scales and all BSI-scales. The results are presented in Table 4. In general, medium to large negative correlations were found between capacity to manage new situations and all BSI-scales. Furthermore, small to medium correlations were found between sensitivity to others, total BSI-score and six out of nine BSI-subscales. Self-awareness only correlated with the obsessive compulsive subscale.

Attachment, Autonomy and General Psychological Functioning

A hierarchical regression analysis was used to test the last hypothesis about the ability of attachment security and autonomy to predict general psychological functioning, after controlling for the influence of age, sex, education and marital status. At step 1 the demographic variables were entered; at step 2, attachment security was entered; the three autonomy scales were entered at step 3. For results see Table 5. At the $p < .10$ level, the demographic variables together explained 11 percent of the variance in general psychological functioning with education being the largest contributor. After controlling for the demographic variables, attachment security did explain an additional 6 percent of the variance ($p < .05$). In the final model, sensitivity to others and capacity to manage new situations explained an additional 22 percent of the variance in general psychological functioning. A correlation analysis revealed a statistically significant negative association ($r = -.24$) between
education and general psychological functioning; further analysis revealed no differences between males and females.

Discussion

The present study examined attachment and autonomy for late-diagnosed adults with ADHD of the combined type. The percentage of securely attached adults with ADHD in this study is 18 percent, over three times lower than in the normal population (59 %). This percentage comes close to the percentage of 13 that is found by IJzendoorn and Bakermans-Kranenburg (1996) for a clinical sample of psychiatric patients. Most frequently, adults with ADHD reported the fearful attachment style (44 %), followed by the preoccupied style (27 %). These two styles are characterized by a negative image of self. Many studies demonstrate adults with ADHD to suffer from low self-esteem (e.g. Barkley, n.d.; Kooij et al., 2010; Ramsay & Rostain, 2005). The first hypothesis, adults with ADHD reporting more insecure attachment styles than the normal population, was confirmed.

Furthermore, it was hypothesized that people with an insecure attachment style would report more psychological problems than people with a secure attachment style. This hypothesis was only confirmed partly: adults with ADHD who have a preoccupied attachment style reported significantly more psychological problems than both the secure and the dismissive group. For the fearful group no significant differences were found with any of the other styles, both secure and insecure.

These results indicated two interesting findings. First of all, the dismissive attachment style, which is an insecure style, could be seen as “equal” to the secure attachment style when general psychological functioning is considered. Wearden, Lamberton, Crook & Walsh (2005) found similar results in their study of a normal population. Secondly, the preoccupied attachment style seems to generate most psychological problems. Analyzing the original model of attachment by Bartholomew and Horowitz (1991), the common factor between the
secure and dismissive attachment style is a positive image of self. Applying this to the first finding, a positive image of self seems to have a larger impact on general psychological functioning than a positive image of others. Wearden et al. (2005) found dismissing individuals to be prone to the social desirability bias, suggesting they might have negative symptoms and feelings without reporting them. Murphey and Bates (1997), however, suggested another explanation. They found that people who are highly critical of themselves are more vulnerable to depression. Additionally, they found dismissively attached individuals to be less critical of themselves compared to individuals with other insecure attachment styles. Therefore, they would be less vulnerable to depression and consequently will report less symptoms. Another explanation might be related to the construct of psychological functioning itself, that is, by nature, more about intrapersonal wellbeing and less about interpersonal functioning. Therefore, it can be expected to be influenced more by someone’s self-image than by someone’s image of others.

Trying to explain the second result that the preoccupied attachment style seems to generate most psychological problems, led us to the original model as well. Supposedly, people with ADHD who have a negative image of themselves and a positive image of others (preoccupied) have even more problems in psychological functioning than people who have a negative image of themselves and a negative image of others (fearful). Many studies found fearful attachment to generate more psychological problems than preoccupied attachment (Vanheule and Declercq, 2009; Murphy and Bates, 1997; Wearden et al., 2005; Pielage, 2000). However, other studies found the preoccupied style to have the highest association with various psychological problems (Bogaerts and Daalder, 2011; Sumer, 2001; Verdecias, Girardin, Ferdinand, Casimir & Browne). Verdecias et al. stressed the rumination habits of preoccupiedly attached individuals. The original model of Bartholomew and Horowitz (1991) offers another possible explanation for the difference between the preoccupied and fearful
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style. By avoiding close involvement with others, persons with a fearful style protect themselves against anticipated rejection. Preoccupied individuals, however, need acceptance from others to increase their self-esteem, which is a mission impossible by nature, and experience rejection every time they try. Since adults with ADHD often suffer from a chronic sense of failure already (Ramsay & Rostain, 2005), the additional failure experiences resulting from their preoccupied attachment style, might damage their self-esteem even more, thus causing them to report more psychological problems.

Besides attachment style, autonomy was studied in adults with ADHD. The first two hypotheses concerning autonomy were confirmed: adults with ADHD had significantly lower self-awareness and higher sensitivity to others than the normal population. This agrees with the possible explanations mentioned before; additionally, still unknown factors might play a role as well. The findings of Rapport et al. (2002) that adults with ADHD would be less sensitive to others, were contradicted by the results of this study.

Although it was expected that adults with ADHD would be less capable of managing new situations, they were found not to differ from the normal population. It is possible that several explanatory factors have a neutralizing effect on each other, resulting in an average score on capacity for new situations for the whole group. The same principle may apply to subgroups within the sample, for example related to attachment style. More research is needed to further investigate this subject.

Concerning the relationship between the three autonomy components and psychological functioning, capacity to manage new situations correlated most strongly with all BSI-scales, followed by sensitivity to others. The hypothesis concerning self-awareness was rejected. Interestingly enough, capacity to manage new situations was the only component of autonomy on which adults with ADHD didn’t deviate from the normal
population. However, since the sample used for present study is rather small, certain effects that were expected might have remained invisible due to lack of power.

Our hypothesis that attachment and autonomy would predict general psychological functioning was confirmed, except for self-awareness. Unexpectedly, level of education was found to have an impact on general psychological functioning as well. Many studies reported adults with ADHD to have a lower education than the normal population (e.g. Barkley et al., 2008; Kooij 2007) and found them to be at risk for underachievement (Young, 2000). Additionally, Kooij (2007) stated that having a higher education and a higher intelligence might compensate for severity of ADHD-symptoms. However, in different populations similar results were found (Bekker & Belt, 2006; Smith & Baltes, 1997; Ford, 2011). Possibly, the relationship found is not exclusive for the ADHD-group but is also valid for other populations.

This study has several limitations. First of all, self-report questionnaires were used as opposed to other, possibly more objective but also more time consuming, ways of measurement. Additionally, the Relationship Questionnaire was a very short questionnaire while longer, slightly more reliable ones were also available. Moreover, attachment style was used as a categorical instead of continuous variable, which made statistical analyses easier but denied its dimensional characteristics. Finally, many relationships between variables were explored which, in combination with a rather small sample size and limited amount of other studies in this area, has led to results and hypothetical explanations that above all stress the need for further research. It is clear that the results of this study should be viewed with care.

Implications for clinical practice

Despite its limitations, this study could have some implications for clinical practice already. First of all, without doubt, most adults with ADHD have an insecure attachment style. Therefore it might be wise to have a new look at present treatment plans that often
emphasize medication, psycho education and coaching. Making more room for attachment related issues, such as interpersonal functioning, could be beneficial. Another implication might be prevention: children with ADHD can be assumed to be at risk to develop an insecure attachment style and parents and professional could work together to prevent this. Possibly a relationship also exists between insecure attachment and the high comorbidity rate in adults with ADHD.

Additionally, adults with ADHD reported several autonomy problems that contributed more strongly to their present psychological functioning than attachment style. Therefore, working on autonomy related issues such as their sensitivity to others and capacity to manage new situations could positively add to treatment as well.

This study also highlights the importance of effective coping skills. Improving the efficacy and range of coping skills of adults with ADHD might help to compensate for the negative effects of an insecure attachment style and overcome autonomy problems. At last, helping ADHD-adults to live up to their educational potential, might be a more powerful means to improve their psychological wellbeing than we had foreseen.

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References


### Tables and Figures

**Table 1**

*Demeographic Information*

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</table>

* 7 missing system
Table 2

*Attachment Styles as Measured in the Sample and Mean Scores on General Psychological Functioning of Participants (BSI-total) for Each Attachment Style*

<table>
<thead>
<tr>
<th>Attachment Style</th>
<th>Male N (%)</th>
<th>Male N (%)</th>
<th>Total N (%)</th>
<th>BSI-total M</th>
<th>BSI-total SD</th>
<th>F (3, 77)</th>
<th>Post hoc</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secure</td>
<td>9 (20.5)</td>
<td>6 (16.2)</td>
<td>15 (18.5)</td>
<td>51.07</td>
<td>34.31</td>
<td>4.55</td>
<td>Preoccupied &gt; secure, dismissing</td>
</tr>
<tr>
<td>Fearful</td>
<td>15 (34.1)</td>
<td>21 (56.8)</td>
<td>36 (44.4)</td>
<td>76.72</td>
<td>35.34</td>
<td>p = .005</td>
<td>secure, dismissing</td>
</tr>
<tr>
<td>Preoccupied</td>
<td>16 (36.4)</td>
<td>6 (16.2)</td>
<td>22 (27.2)</td>
<td>84.95</td>
<td>32.87</td>
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</tr>
<tr>
<td>Dismissive</td>
<td>4 (9.1)</td>
<td>4 (10.8)</td>
<td>8 (9.9)</td>
<td>47.25</td>
<td>31.76</td>
<td></td>
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</tr>
<tr>
<td>Total</td>
<td>44 (54.3)</td>
<td>37 (54.7)</td>
<td>81*</td>
<td>71.30</td>
<td>36.38</td>
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</table>

* 3 missing system
Table 3

*Mean Scores on Autonomy Scales for Norm and Sample Group*

<table>
<thead>
<tr>
<th></th>
<th>Norm Group</th>
<th>Sample Group</th>
<th>Score</th>
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<tbody>
<tr>
<td></td>
<td>$M$ (SD)</td>
<td>$M$ (SD)</td>
<td></td>
</tr>
<tr>
<td>Self-awareness</td>
<td>26.61 (4.71)</td>
<td>22.98 (6.40)</td>
<td>Below average</td>
</tr>
<tr>
<td>Sensitivity to Others</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Total Group</td>
<td>56.04 (9.39)</td>
<td>65.13 (9.61)</td>
<td>Above average</td>
</tr>
<tr>
<td>Males*</td>
<td>52.35 (8.54)</td>
<td>61.52 (9.87)</td>
<td>Above average</td>
</tr>
<tr>
<td>Females*</td>
<td>60.05 (8.60)</td>
<td>69.50 (7.29)</td>
<td>Above average</td>
</tr>
<tr>
<td>Capacity to Manage</td>
<td>18.27 (4.93)</td>
<td>16.56 (5.70)</td>
<td>Average</td>
</tr>
<tr>
<td>New Situations</td>
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</tbody>
</table>

* Compared to the norm group for males or females respectively. There are no separate norm groups for the two other scales.
### Table 4

**Pearson Correlations and Reliability Measures for BSI-Scales, Autonomy Scales, Demographic Variables and Attachment Security**

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<td>2 Sensitivity to others</td>
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<td>3 Capacity to manage new situations¹</td>
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<td>5 Somatization¹</td>
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<td>0.77**</td>
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<td>6 Obsessive compulsive</td>
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<td>-0.45**</td>
<td>0.74**</td>
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<td>7 Interpersonal sensitivity³</td>
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<td>0.80**</td>
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<td>0.54**</td>
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<td>0.56**</td>
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<td>0.61**</td>
<td>0.56**</td>
<td>0.62**</td>
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<td>0.78**</td>
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<td>0.49**</td>
<td>0.68**</td>
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<td>0.66**</td>
<td>0.35**</td>
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<td>n.s.</td>
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<td>17 Marital statusª</td>
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<td>n.s.</td>
<td>n.s.</td>
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<td>n.s.</td>
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</tbody>
</table>

¹ Square root transformed variable; ² Not normally distributed; ³ Calculated on raw scores; * p < 0.05 (two tailed); ** p < 0.01 (two tailed)
n.s. not statistically significant (p > 0.05); a no correlation analysis performed with BSI-subscals
Table 5

Summary of Hierarchical Regression Analysis for Variables Predicting General Psychological Functioning

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1</th>
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<th>Model 2</th>
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<th>Model 3</th>
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<tr>
<td></td>
<td>B</td>
<td>SE B</td>
<td>β</td>
<td>B</td>
<td>SE B</td>
<td>β</td>
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<td>Education</td>
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<td>-.28*</td>
<td>-12.81</td>
<td>5.92</td>
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<td>-.23*</td>
<td>-.97</td>
<td>.50</td>
<td>-.25*</td>
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<td>8.19</td>
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<td>3.42</td>
<td>.03</td>
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<td>-16.98</td>
<td>9.32</td>
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<td>Sensitivity to others</td>
<td>1.01</td>
<td>.42</td>
<td>.27*</td>
<td></td>
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</tr>
<tr>
<td>Capacity to manage new situations</td>
<td>-21.28</td>
<td>5.6</td>
<td>-.41**</td>
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<tr>
<td>$R^2$</td>
<td>.11</td>
<td>.16</td>
<td>.38</td>
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<tr>
<td>$F$ for change in $R^2$</td>
<td>2.08*</td>
<td>4.55*</td>
<td>8.01**</td>
<td></td>
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* $p \leq .10$
* $p \leq .05$
** $p \leq .01$
Figure 1

*Four Category Model of Adult Attachment*

<table>
<thead>
<tr>
<th>Model of Self (anxiety)</th>
<th>Positive (low)</th>
<th>Negative (high)</th>
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</thead>
<tbody>
<tr>
<td>Secure</td>
<td></td>
<td>Preoccupied</td>
</tr>
<tr>
<td>Dismissive</td>
<td></td>
<td>Fearful</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model of other (avoidance)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive (low)</td>
</tr>
<tr>
<td>Negative (high)</td>
</tr>
</tbody>
</table>