

ANXIETY AND HOSPITALIZATION IN ADOLESCENCE: RELATIONS TO ATTACHMENT STYLE AND PARENTAL SUPPORT

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SUMMARY

This exploratory study examined attachment style and state/trait anxiety in adolescents - 30 recently hospitalized psychiatric patients, and 49 school controls. All were aged 13-18, with the majority (67%) female. The attachment style interview (ASI, Bifulco et al. 2002) was administered, together with the Recent Life Events questionnaire (Brugha & Cragg 1990) and the STAI anxiety questionnaire (Spielberger et al. 1983). Results showed the hospitalised group to have significantly more negative interactions with parents and poorer support than the comparison group. They had significantly more insecure attachment style (96% s 37%). Among the hospitalized adolescents, both the Anxious and the Avoidant attachment style group had higher anxiety scores on the STAI-trait scores than on the STAI-state scores assessed during the first days of hospitalisation. This suggests adolescents, even those with Avoidant attachment feel less anxious after admission. Implications for assessing attachment style in adolescent patients to aid with care planning is discussed.

Key words: adolescence – attachment – anxiety – hospitalization - parental support - care-planning

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INTRODUCTION

Research investigation of attachment style in adolescents is relatively recent and has become key in examining its role in development and psychopathology (Allen et al. 1998, Wright 2003). Unique features at this lifestage are biological maturation through puberty, and new forms of social interactions as adolescents become more independent from their parents, particularly in psychological terms. It is also an age and lifestage when rates of psychopathology increase and in some cases peak. When severe cases require hospitalisation in adolescents, this represents a potentially stressful period of separation from the family environment and a time in which the attachment system is likely to be activated. The presence of an insecure attachment style is likely to impede coping and support-access from parents and others during such separation, given that full autonomy has not yet been achieved and such support is likely to be crucial (Allen et al. 2003). It is therefore important to assess attachment styles in relation to care practices in hospitalising psychiatrically disordered adolescents. It is now many years since Bowlby had a key influential role in allowing the presence of parents in hospital for their infants and children to aid recovery. Investigating parallel needs of adolescents, in attachment terms, has not been made.

There is a body of work to show that insecure attachment organization may serve as one of a host of psychological, biological, and environmental factors that directly and indirectly influence both adaptation and the risk of psychopathology in adolescence and adulthood (Cummings & Cicchetti 1990, Bifulco et al.

2002, Bosquet & Egeland 2006, Lyons-Ruth 2008, Peter 2008, Obsuth et al. 2010).

There are, however, very few studies which have assessed the attachment of inpatient adolescents in comparative studies. Allen and his colleagues (Allen et al. 1996) compared 66 upper-middle-class adolescents who were psychiatrically hospitalized at age 14 with 76 comparison high school students, matched socio-demographically. Other studies have examined general risk factors for hospitalisation (Borchardt et al. 1994, Groholt et al. 2000).

The period of hospitalisation, a separation from the family and school environment has frequently been viewed by practitioners as providing a necessary break from stressful family contexts, but in fact may constitute a stress factor in itself due to separation from family, friends and change in routines. Few studies have looked at the impact on adolescents of admission to psychiatry departments in terms of anxiety and stress regulation. Those which have explored this area have evaluated adolescents admitted for physical illness, assessed just once during hospitalization (Volicer & Bohannon 1975, Bailly et al. 2004, Welniarz & Medjdoub 2007) showing it to indeed constitutes a stressful experience. But this has not been documented for hospital admission for psychiatric disorders. It is possible that since hospitalization involves a separation from attachment figures, there is no source of affect-regulation to combat the high stress involved and reactions will differ according to the adolescents' attachment style. However, this is complicated by the often problematic relationship between the adolescent patient and his/her caregivers.

Current models for understanding attachment style focus on its function as a system for controlling stress (Kobak et al. 2006), for affect-regulation (Mikulincer & Shaver 2005) and access of support (Mikulincer & Florian 1998). In these models, insecure attachment style is identified as a vulnerability factor which in the presence of a stressor can activate an onset of psychiatric disorder through poorer affect-regulation and support. The models also postulate the role of attachment style in resilience. It is currently accepted that links exist between better autonomy, better socialbility and greater flexibility in the psychological functioning of adolescents with secure attachment style compared to those with insecure attachment style, with the former finding it more easier to cope with stress (Allen et al. 1998, Zimmermann et al. 2001). It also appears that when faced with stress, those with secure attachment style tend to look for social support and are able to use it to solve problems and provide emotional regulation. In contrast those with insecure styles use interpersonal resources less (Scott Brown & Wright 2003, Nelis & Rae 2009). For adolescents in stressful situations, those with insecure attachment style tend to either inhibit affect-expression or overestimate affects (Cunliffe et al. 1999, Voss 1999, Beijersbergen et al. 2008).

These reflections on attachment style and support-access as a stress regulator are particularly useful when considering health care practices, particularly those around adolescent psychiatric hospital admissions. Usually, the hospitalization contract between the care team and the adolescent and his/her parents attempt to regulate physical and telephone contact without first assessing the relationship with parents or attachment style. It seems essential to measure the effect of such contact policies on adolescent anxiety and whether this differs according to attachment style.

AIMS OF THE STUDY

This study is exploratory since there are currently no French studies, and few in English speaking countries, which compare the attachment styles of a clinical population of adolescents admitted to hospital for different psychic disorders and those of a non-clinical population. This has practical relevance for the hospital management of adolescents and the clinical benefit of assessing their attachment style.

The first aim of the study is to compare the attachment styles, the quality of perceived support and the quality of interaction with the parents between the two populations. The second aim is to assess the influence of the hospitalization in a psychiatry unit on the adolescents anxiety. The third aim of the present study is to evaluate the relationship between anxiety and the attachment styles of the adolescents.

Method

Participants: The participants were 79 adolescents aged between 13 and 18. Of these 30 were recent

admissions to psychiatric hospital and 49 were from a normative school population. Sixty-seven per cent were female.

Patient group: The 30 adolescents were consecutive patients recruited to two adolescent units of the University Hospital in Besancon France, over a period of eighteen months. These comprised an emergency reception unit and a scheduled admission unit. The adolescents were hospitalized for diverse psychiatric disorders, including mood disorders, eating disorders, suicide attempts and behavioural disorders, including school refusal. The amount of time spent in hospital varied considerably depending on the psychopathology, but ranged from between 2 and 24 weeks. In general, there was no direct contact between the adolescent and his or her parents or close relatives during the first week in hospital, and after that only once or twice per week, and then with the parents only. Adolescent patients with psychosis or learning disability were excluded from this study. The remainder were approached over a period of eighteen months. Refusal to participate by adolescent or parent occurred in seven cases.

Comparison group: The 49 school adolescents were recruited from two separate secondary schools, an 8th grade class (age 13-14) with a population of pupils from a mixed social background, and older pupils, chosen at random from 10th, 11th and 12th grade classes (age 15-18). Refusal to participate by adolescent or parent occurred in only one case.

The average age of both groups was 14.88 (standard deviation=1.60). The two groups were statistically comparable in age, sex, social background, number of siblings and sibling position.

Ethical procedure

This study received ethical permission from the Committee for the Protection of Persons (CPP EST-II) (protocol no.P/2007/59), together with permission from the University Hospital and complied with the principles laid down by the declaration of Helsinki. For the two groups, informed and written consent was compulsory, signed by the adolescent and their parents at the same time. In the patient group this was collected at time of admission. The signature of both parents was required in cases of shared parental authority but for children who were the responsibility of Social Services or had other legal guardians, the signatures of such guardians were required.

Study Procedure

Assessing adolescent patients was carried out during the first week of hospitalization, in order to avoid any influence of subsequent psychotherapy on anxiety or attachment assessments. The self-report questionnaire of anxiety was administered immediately prior to the adolescent ASI in a one-to-one session. The life events questionnaire is incorporated in the early questioning on the ASI and administered verbally, the session being audiotaped. For the group of adolescents at school,

pupils were chosen at random. The evaluation was carried out in two stages: undertaking the anxiety scale as a class exercise for an hour then a one-to-one audio-taped interview using the ASI. All information was anonymised with ASI subsequently scored from the tape recordings and labelled only by case number.

Measures

The Attachment Style Interview for adolescents (ASI)

The ASI is an investigator-based interview (Bifulco et al. 2002) validated in French (Bifulco et al. 2004, Guedeney 2005) originally used for adults, but which has been adapted for use with adolescents (Figueiredo et al. 2006, Bifulco 2008, Oskis et al. 2010). It assesses attachment style based on the ability to make and maintain supportive relationships together with attitudes about closeness to / distance from others, autonomy and fear / anger in relationships. The ASI provides an overall assessment of support by incorporating the quality of the relationship with one parent and up to two Very Close Others (VCOs) who can be friends, or family members and can include the second parent. Questions include ascertaining level of confiding, active emotional support, positive and negative interaction and felt attachment. The criterion of having at least two close supportive relationships with high confiding and emotional support provides the framework for a judgment of a good 'ability to make and maintain relationships' which in turn provides the basis for rating the degree of attachment security. In addition, seven attitudinal ASI-scales are scored to determine types of avoidance (e.g. mistrust, constraints on closeness, high self-reliance, anger) and anxious (e.g. desire for company, fear of separation and fear of rejection) styles. Rules for combining the scoring of ability to make relationships and the attitudinal scales enables a classification of type of style (Enmeshed, Fearful, Angry-dismissive, Withdrawn or Clearly Secure), and the degree of insecurity of insecure style (markedly, moderately, mildly or not insecure). Previous analyses have grouped the styles three ways, into Secure, Anxious (Enmeshed or Fearful) and Avoidant (Angry-dismissive or Withdrawn). There is also a dual or disorganized style based on the presence of two simultaneously insecure styles, which is rare in community samples (9%, Oskis et al. 2010). These have a 'main attachment style' and a 'subsidiary style'. For certain analyses the main style is used to denote either Anxious or Avoidant style.

The interview takes between 60-90 minutes and is recorded with key selected comments transcribed onto purpose designed scoring schedules. Scoring scale takes place afterward the interview on re-listening to the tape and takes about 2 hours. Scorings are made on the basis of prior training and reference to benchmark thresholds for rating scales, with detailed instructions provided on deriving the overall attachment style profile from subsidiary scales. The measure has been standardised, and shown to have good reliability in adolescent

populations in both normative (Oskis et al. 2010) and high-risk populations such as adolescent pregnancy (Figueirido et al. 2006) and in offspring of depressive vulnerable community adolescents (Bifulco 2008).

Previous inter-reliability has been shown to be good on a similar school on the adolescent ASI sample (aged 9-16 (Oskis et al. 2010) and on the French version of the adult ASI (Bifulco et al. 2004, Guedeney 2005). All interviews were undertaken and scored by the first author who undertook a 3-day training course with the interview designer (last author) who then checked the scorings. An independent inter-rater reliability was undertaken on 5 cases with complete agreement reached for the overall attachment scale and average Kappa on individual scales of 0.75.

In addition to questioning about support and attachment style, the ASI also asks about loss of parent in childhood and incorporates an assessment of life events in the 12 months before interview (Brugha & Cragg 1990). This is a standardised measure that involves 12 items identifying negative life events that have happened to self or close others.

State-trait Anxiety Inventory (STAI)

The STAI (Spielberger 1983) is a self-report questionnaire which quantifies the current 'state' anxiety experienced as well as the 'trait' or general individual tendency to feel anxious. STAI is one of the most widely used anxiety psychometric test and is validated in diverse populations and in different stressful situations (Gauthier & Bouchard 1993). This scale was administered during the first week of hospitalization to examine rates of state anxiety, expected to be higher at the beginning of hospitalization, as well as trait anxiety. Previously published threshold scores of 46 were taken to dichotomise anxiety scores (Spielberger 1983, Bardel & Colombel 2009). The questionnaire is made up of two separate parts of 20 items each, assessed from 1 to 4 with a total score range of 20 to 80, the higher score reflecting higher anxiety levels. The measure has been standardised in French. ("Inventaire d'Anxiété Situationnelle et de Trait d'Anxiété" (IASTA-Y)). Analyses of reliability and construct validity show that the psychometric qualities of the French version are similar to the original English version (Gauthier & Bouchard 1993).

Statistical analysis

Statistical analyses were performed with SAS 9.3 for Windows (Statistical Analysis System, Cary, NC, USA). The level of significance was set at $p < 0.05$ for all tests.

Variables were expressed as a mean \pm SD, and tested with the Student test or with Mann-Whitney test if data deviated from the normal distribution. Each modality is presented according to its frequency and tested with the chi-square test. Post hoc test used were SAS macro %Compprop and %Dunn.

RESULTS

Demographic factors

The two groups of adolescents were matched to be similar in terms of age, sex, number of siblings and sibling position (p values $>5\%$; see table 1). The hospitalised group was somewhat less likely to have parents who were currently married/cohabiting (40% vs 61.22%, ns). There were also a higher number of parental deaths in the hospitalised group (13.33% versus none in the comparison group). Thus greater childhood instability indicated in the hospitalised group is consistent with vulnerability for psychiatric disorder. When life events were examined for the previous year, the average number was significantly greater in the hospitalised group (2.13 vs 0.86, $p<0.0001$).

Support

The first section of the ASI concerns the quality of relationships with parents and close support (Very Close Others). The adolescents of the hospitalised group were found to have much less support. They had more negative interaction with their mother (73% vs 30%, $p=0.001$). Overall the hospital group had fewer Very

Close Others rated as supportive with 36% vs 66% of the school group ($p=0.02$) having at least one.

Insecure attachment styles

There was a highly significant difference in the rates of insecure attachment in the two groups (see table 2, columns 1 and 2). Nearly all (96.67%) of the hospitalised population was rated insecure (at any severity level), versus 33.74% in the school population ($p<0.0001$). When type of style was examined, in the hospitalised series the rates were 50% Anxious (Enmeshed 26.67% and Fearful 23.33%), 46.67% Avoidant (Angry-dismissive 36.6% and Withdrawn 10%), 19% dual/disorganised style and 4% Secure. In the comparison group 20.4% had Anxious styles (Enmeshed 10.20% and Fearful 12.24%) with 14.29% Avoidant (Angry-dismissive 6.1% and Withdrawn 10.2%), 63.2% Secure and none had dual/disorganised style. In the hospital group the dual/disorganised styles included two Enmeshed/Fearful, one Enmeshed/ Withdrawn and two with Fearful/Angry-dismissive styles. Given that the numbers with dual/disorganised style is low, for the remaining analysis these are subsumed under the main categorisation of Anxious or Avoidant style.

Table 1. Demographic variables

	Hospital Group (n=30)	Comparison group (n=49)	p
Age Mean (SD)	15.10 (1.56)	14.74 (1.62)	NS
Male	23.33% (7)	38.78% (19)	NS
Female	76.67% (23)	61.22% (30)	
Position in family- Mean (SD)	1.63 (1.1)	1.76 (0.99)	NS
Number of siblings – Mean (SD)	2.76 (1.2)	2.51 (1.2)	NS
Married	40.00% (12)	61.22% (30)	
Divorced	46.67% (14)	38.78% (19)	0.0151
Parent dies	13.33% (4)	0.00% (0)	
Mean (SD) number of life events in the last year	2.13 (1.59)	0.86 (1.00)	<0.0001

Table 2. Distribution of attachment styles in the two groups and compared with UK

Attachment style	A. Hospitalized group (n=30)	B. School group (n=49)	C. UK school group* (n=62)
Secure	1 (4%)	31 (63.2%)	50%
Insecure Anxious	15 (50%)	10 (20.4%)	
Enmeshed	8 (26.67%)	5 (10.20%)	23%
Fearful	7 (23.33%)	5 (12.42%)	
Insecure Avoidant	14 (46.67%)	8 (14.29%)	
Angry-dismissive	11(36.6%)	3 (6.1%)	16%
Withdrawn	3 (10%)	5 (10.2%)	

* Oskis et al. 2010; A x B, $p<0.0001$; B x C, NS; B x D, NS

Table 3. State-anxiety and trait-anxiety in the hospitalized and school groups

	Hospitalized group (n=30)	School group (n=49)	Group difference
State-anxiety (Mean and SD)	37.10 (12.63)	33.38 (9.25)	$p=0.1369$
Trait-anxiety (Mean and SD)	50.03 (13.97)	43.97 (10.94)	$p=0.0351$
Anxiety difference	$p=0.0004$	$p<0.0001$	

Anxiety

The state-anxiety scale scores were no different in the hospitalized group (37.1; SD=12.63) and the school comparison group (33.38; SD=9.25, $p=0.1369$; table 3). However, the trait- anxiety scale scores were higher in the hospitalised group (50.03; SD=13.97) than scores of the school group (43.97; SD= 10.94, $p=0.0351$). Among the hospitalised group, the state-anxiety scores were lower than the trait-anxiety score ($p=0.0004$)

Anxiety and attachment style in the hospitalised group

As there was only one adolescent with secure attachment in the hospitalised group, this individual was excluded for the analysis comparing the Anxious with the Avoidant attachment style group. Hospitalized adolescents with Anxious attachment style had higher trait-anxiety scores than state-anxiety scores (stai-state=41.27; stai-trait=54.93; $p=0.02$), but so did the hospitalized group with Avoidant attachment style (stai-state=33.78; stai-trait=45.64) (see figure 1). No differences were found between the two hospitalised groups ($p=0.16$ for the STAI- state; $p=0.07$ for the STAI -trait).

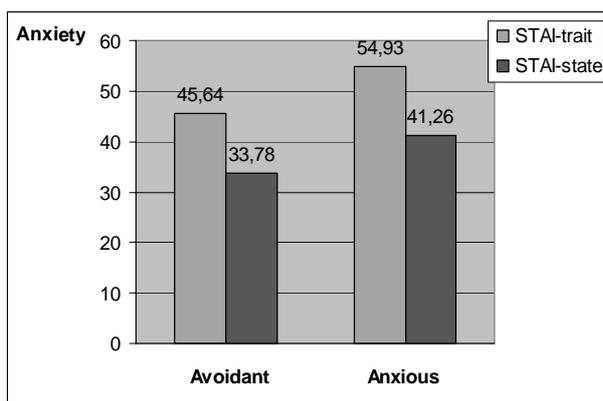


Figure 1. Mean of the STAI scale scores for anxiety for avoidant ($n=14$) and anxious ($n=15$) insecurely attached groups in the hospitalized sample ($p<0.05$ in both groups)

DISCUSSION

Hospitalisation involves separation from key attachment figures, and in adolescence this may constitute a stressor which can increase state anxiety levels particularly in those vulnerable and who have an insecure attachment style. This research study is exploratory in investigating this effect in a group of adolescents hospitalised for psychiatric disorders in relation to their level of support and insecure attachment style, and comparing risk and anxiety with a normative school group. As expected, the hospitalised group had more childhood instability than the comparison school group – having less likelihood of living with both parents, and a higher rate of childhood moves of house. They also experienced more negative events in the last

12 months. They had a less close and supportive relationship with their mother, with more negative interaction, and had fewer close support figures. Nearly all had insecure attachment style (96.5%) compared with only around a third of the comparison group (37%). A small group of four hospitalised adolescents had a dual or disorganised style but numbers were not sufficient to examine these separately. The rates of secure and insecure styles in the comparison group is largely consistent with other findings in adolescence: in a meta-analysis Van Ijzendoorn (1995) and a UK school sample (Oskis et al. 2010). This suggests that the sample measured here using the ASI was normative for adolescents. In terms of the clinical population, rates are directly comparable with findings of Rosenstein and Horowitz (1996) and Wallis and Steele (2001) who found 98% insecure attachment in a population of hospitalized adolescents. This suggests the findings with the ASI are valid.

This study unexpectedly found no difference in state-anxiety between the hospitalized group and the school comparison. In fact contrary to expectation, levels of anxiety on hospitalisation tended to be lower in the target group. The scale was administered in the first week of hospitalization to try and reflect state-anxiety due to separation from parents and family. Following Kobak's model of attachment (Kobak et al. 2006) attachment style is incorporated into a stress-regulation system, and contrary to hypothesis, it may be that hospitalization allows for relief and a positive response to activation signals of the attachment system, particularly among those with Avoidant style. It is quite possible that in the weeks or months preceding hospitalization, the insecure adolescent has not been able to access support then hospital care with a professional team may allow the adolescent to find new strategies for regulating stress in this context.

In other studies of adolescents, clinical anxiety and depression are shown to be more common amongst those with Anxious attachment styles (Kobak & Sceery 1991, Allen et al. 1998, Bosquet & Egeland 2006, Figueiredo et al. 2006, Bifulco 2008). The ASI unusually differentiates angry-avoidance from withdrawn-avoidance, and both categories are relatively rare in adolescence (Bifulco 2008). The high rate in the hospitalised population in this sample may indicate the reason for lower than expected anxiety rates, but also may indicate particular types of childhood vulnerability involving high anger. This is consistent with the higher negative interaction with mothers in the hospital sample. Examining anger in relation as an aspect of attachment style and in relation to hospitalisation requires further investigation. Insecure attachment style measured in this study was associated with poorer support from parents, friends and family. Given, attachment style in adolescents is in a developmental process of individuation it is a potentially critical point in terms of later development (Kobak & Cole 1994, Allen et al. 2007). In adolescence, attachment security is linked to the ability

to look for emotional support in other people and to establish new relationships with a dependence-autonomy balance from the start of adolescence. Such support and attachment needs to be broadened from maternal attachment to a wider group of family and friends (Allen et al. 2003). Acknowledging the importance of such peer and family support needs to be given in working with adolescents for optimal development and functioning.

In terms of implications for hospital admission practice, it is important to note that almost all the hospitalized adolescents had insecure attachment style, with a propensity of Angry-dismissive style which is both highly self-reliant and hostile. This may be important information for hospital practitioners and clinicians when managing admission and establishing treatment programmes. Institutional work is based on interpersonal relationships which adolescents develop with care staff, in order to allow them to change their representations of emotional support of others and to change their social strategy, among other things. Given that existing research shows that lack of familial and social supports is associated with insecure attachment organization and may increase vulnerability to existing psychopathology, whatever its initial source (Cicchetti et al. 1990, Allen et al. 1994) this needs to be taken into account when there is an existing disorder which has the potential for escalation if separations from attachment figures are not handled sensitively.

More specifically in adolescence, research increasingly attaches importance to peer support and to social strategies implemented by adolescents according to their attachment style (Scott Brown & Wright 2003, Nelis & Rae 2009). The first stages in care should be to assess these difficulties and then to take them into consideration. Another aspect of the treatment should be to help these adolescents to better recognize and use available social supports in their environments (Dozier & Tyrrell 1998).

Study Limitations

Whilst these exploratory findings are the first in a French psychiatric adolescent sample and show important associations, there are also limitations of the methodology. The sample selected was small which constrained further analysis and made the statistical power weak. It was also cross-sectional which meant that the timing of support, attachment style and anxiety in relation to hospitalisation could not be determined. It also included a combination of different disorders in the hospitalised group, which may have confounded any association with anxiety on admission. The study was designed to be psycho-social in its approach, but increasingly it is acknowledged as important to use physiological measures to assess correlates of emotional disturbances, particularly in anxiety provoking situations (Beijersbergen et al. 2008). Thus given the adolescents in the hospitalised sample reporting no increased state-

anxiety, it would be useful to apply physiological tests to see if in effect there were physical signs of stress response. It would also be of value to examine attachment style and peer relations in these hospitalized adolescents once they have been discharged to look for change.

CONCLUSION

The question of attachment mechanisms is essential for assessing care practices with adolescents when long periods of separation from their usual environment is necessitated such as during psychiatric hospital admission. This study found that the majority of adolescents admitted to hospital have an insecure attachment style (with a high rate of Avoidant) and poor relationships with parents and no evidence for higher state-anxiety in relation to hospitalization. In adolescence, which is a period of separation-individuation, the challenge is to find alternative attachment figures for affirmation and emotional support. The aim of care should be to help adolescents to develop these capacities during the hospitalization and treatment period. To achieve this improved assessment methods need to be put in place during hospital admission to aid in the care of adolescents with disorder.

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