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Attachment representation and affect regulation. Current findings of attachment research and their relevance for psychosomatic medicine

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Abstract

Attachment theory has become a focus of interest in psychosomatic research in recent years. The theoretical perspective of attachment development covers issues of the developmental predisposition for psychosomatic illness, psychobiological aspects and issues of coping. In detail four issues of psychosomatic research might be addressed from an attachment theoretical perspective: (1) Is the prevalence of insecure patterns of attachment increased in patients with psychosomatic disturbances (developmental aspect)? (2) Does insecure attachment correlate with a higher physiological arousal in reaction to various kinds of stress (psychobiological aspect)? (3) Are associations to be found between insecure attachment and disturbances of affect regulation, which are linked to the aetiology of psychosomatic illness behaviour (aspect of coping)? In the paper presented we focus on two of these issues: we report the empirical evidence suggesting a high proportion of insecure attachment in psychosomatic disorder and discuss the links between insecure attachment, affect regulation and psychosomatic illness.

***Key-words**: Attachment; Affect regulation; Psychosomatic disorder; Illness behaviour.*

BASIC CONCEPTS OF ATTACHMENT THEORY

Bowlby defined attachment behavior as an innate system of conduct whose task it is to provide those who are not yet self viable after birth, with a sense of closeness and security as protection against external dangers (Bowlby, 1975). Attachment behavior refers to all codes of conduct serving to establish or protect the close vicinity to an attachment person, as a rule this is the mother. With humans, in the first months of life this behavior is indicated through sucking, clinging, crying and smiling. By the end of the first year the different reactions small infants show to separation from the attachment person demonstrate

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varying patterns of conduct. Individual differences in the attachment behavior are brought into the foreground as of this age. Empirical descriptions of the individual differences in attachment behavior refer to studies carried out by the Canadian development psychologist M.D.S. Ainsworth (Ainsworth et al., 1971; Ainsworth et al., 1978; Ainsworth and Wittig, 1969). Ainsworth found reactions of twelve-month-old children to a short separation from the mother as showing different characteristics. While some children break out into helplessness and anxiety, others can tolerate the separation much better. Ainsworth brought these different reactions to separation into connection with the security of infant bonding with the mother. To examine this hypothesis empirically, she developed a structured situation for testing which has since become known as the "Strange Situation". Based on her observations in the "Strange Situation", Ainsworth et al. (1978) was able to categorize the infant bonding behavior into three main groups. She differentiated children with secure attachment (B-category), children with insecure-avoiding attachment (A-category) and children with insecure-ambivalent attachment (C--category). Children in the B-category could use the mother as a "secure base" in the periods of free play and exploration. At the reunion after both separation periods the children demonstrated welcoming behavior through laughing, calling and actively moving towards the mother. These children quickly allowed their mothers to calm them and soon returned to their play and exploration activities. Children in the A-category demonstrated a surprisingly low anxiety reaction. At the reunion, however, they noticeably avoided closeness and interaction: the mother was either totally ignored upon return or the greeting was with avoidance behavior such as turning away, walking past or avoiding eye contact. Children in the C-category reacted to the separation from the mother with a great amount of doubt. Even before the separation the exploring behavior was limited due to the search for closeness and contact. At the reunion the children behaved ambivalently: they tried on the one hand to establish physical contact and on the other hand handicapped this through annoying behavior such as kicking, pushing themselves away etc. These children were difficult to calm after the separation and showed only delayed return to the play and exploring activities.

To be sure the behaviors observed in the "Strange Situation" demonstrated characteristics of all-embracing situations of infant-mother interaction and were not an artefact of the laboratory situation, Ainsworth also observed the interaction between mother and child in the home environment. Differences were shown thereby which validated the "Strange Situation" observations: in the home, the mothers of B-children applied more physical contact and were more sensitive, coo-

perative and approachable than the mothers of insecure avoiding children. The mothers of A-children often reacted with delay to the cries of their babies and observed these even less often after the reunion (Ainsworth et al., 1978). They also allowed more undercurrent anger and undercurrent annoyance, as well as a higher degree of rigidity and rejection to be shown to their children than mothers of securely attached children. Scoring the maternal behavior in dimensions of sensitivity against inadequate consideration (Ainsworth, 1973, 1977; Ainsworth et al., 1978, Ainsworth et al., 1971) proved to be a significant influential factor of the attachment security (for the construct of maternal sensitivity see Ainsworth et al., 1978; Belsky, 1984; Egerland and Faber, 1984; Grossmann et al., 1985). The connection between maternal sensitivity and quality of attachment during the first year has been confirmed in numerous further studies (Belsky, 1984; Egerland and Faber, 1984; Grossmann et al., 1985).

Further observations led to a discovery in the mid-80s of the disorganized attachment behavior. Researchers working with maltreated and psychologically conspicuous parents had realized that some children, who had been maltreated, had been scored as "secure" in their attachment behavior although they simultaneously demonstrated behavior patterns typical of insecure-avoiding as well as insecure-ambivalent children (Crittenden, 1985; Radke-Yarrow et al., 1985). Main reported that some 13% of the children in the "Bay Area spot check" could not be categorized according to the usual rules of classification by Ainsworth (Main and Weston, 1981). A later reanalysis of the video tapes showing children who were difficult to categorize proved that the majority of non-categorized children demonstrated disorganized behavior ("D"Muster) in the presence of the parents (Main and Solomon, 1986; 1990). Attributed to disorganized attachment behavior were non-developed, incorrect or broken-off movements and vocalization sounds of cries to strangers while they left the room, non-developed hits to the face (often the eyes) of the parents, movement stereotypes, asymmetrical and temporally uncoordinated movement and posture abnormalities, freezing, staring expressions or a generally slowed movement and movement of expression. These phenomena of behavior were labeled disorganized because they show a tendency towards a break in the organized attachment behavior strategy as described above. They were not regarded as coherent attachment behavior strategy (Main, 1995). In non-clinical spot checks, the percentage showing codes of conduct indicating disorganization lies at 15-25%. In spot checks with maltreated children the percentage lies at 80% (Carlson et al., 1989; Lyons-Ruth et al., 1991). This closely relates to the assumption that disorganized attachment behavior is a consequence of trauma.

INTERNAL WORKING MODELS AND THE MENTAL REPRESENTATION OF ATTACHMENT

In later child and adult life the cognitive processing of social experience as well as the use of symbolical communication in the structure of attachment relationships becomes increasingly important.

The description of individual differences in the quality of attachment can therefore no longer be exclusively orientated towards behavior in later development phases. This led to attachment research from the mid-80s becoming increasingly interested in examining the quality of attachment at levels of mental, psychological representation of the attachment experience. The term attachment representation refers to the individual differences in the quality of attachment, in the same way as these can be deduced from language discourse about attachment experience.

The development of a new method of examination introduced in the 80s to record the differences of attachment representation in adult life served to examine the transgenerational continuity of individual differences in the quality of attachment. It was shown in a whole series of studies that the attachment representation of the mother, or the main attachment person, did indeed provide a relatively reliable prediction about the attachment security of the infant in the "Strange Situation" at the age of 12 months (Ainsworth and Eichberg, 1991; Fremmer-Bombik, 1987; Fonagy et al., 1991; Grossmann et al., 1988; Ward and Carlson 1995).

The ontogenetic continuity of the attachment behavior i.e., the prediction of security in the quality of attachment in later child and adult years was the content of a great number of studies. The results showed that the ontogenetic continuity of the attachment organization between different age groups varied. In the age bracket between 12 and 18 months (Main and Weston, 1981; Waters, 1978), between one year and six years (Main and Cassidy, 1988; Wartner et al., 1994) and between one year and 10 years a high to very high stability in the attachment behavior (over 80%) could be proved. The results of long--term studies examining the continuity of the quality of attachment between 12 months and 16, 17, and 21 years are contradictory. Two studies established a stable quality of attachment even over these very long time pe-riods (Hamilton, 1995; Waters et al., 1995). One examination found no connections (Zimmermann et al., 1995). The discussion about how these contradictory results are to be explained is still ongoing.

The Adult Attachment Interview (George et al., 1985-1995), which is used in many of the quoted studies as the test method, is a half structured conversation consisting of 15 questions relating to attachment experience during childhood and its influence on further personal development. The interview harks on the assumption that attachment security in

adults is reflected in the differences in accessibility to the attachment experience from childhood. The accessibility to the attachment experience is judged on its completeness, extensiveness and coherence of description in the interview (Main and Goldwyn, 1985-1996).

The typology of attachment representation in adulthood is based on the infant model of attachment behavior in the "Strange Situation". It shows that subjects with an insecure--avoidant attachment representation often couldn't prove their general judgement on attachment experience via episodic memory.

Relationship experience was idealized in general descriptions without it being proven through passing, correlating episodic recollection. Furthermore, attachment experience was considered of little relevance for one's own personal development. A secure--autonomous attachment representation, however, allowed for an extensive, clear and precise account of the different facets of previous attachment experience. The account is complete and coherent. General and episodic descriptions agree very well. The test subjects behaved cooperatively in the interview. Positive as well as negative aspects of the relationship with their parents were often discussed, whereby there was a changeable focus of attention during the discussion between questions posed by the interviewer and the personal recollections and thoughts (Main and Goldwyn, 1985-96). Persons with insecure-ambivalent attachment representation are not in a position for coherent and objective description due to their involvement in previous attachment experiences. Instead, the description of the attachment person changes in quick succession between positive and negative judgements. The subjects lose the line of discussion without realizing this themselves. They are unable to abstract specific experiences and recollections and draw general conclusions. The interview is characterized by mainly episodic memories, which are not brought together with a general picture of the attachment history.

Analogue to the D-category of infant attachment behavior a U-category for adulthood was set up (Main and Goldwyn, 1985-1996; Main and Hesse, 1990). The main characteristic of the disorganized and unresolved attachment representation is the unsuccessful or incomplete working through of loss or trauma (maltreatment or misuse by the attachment person), which has led to a disorganized behavior or thinking process. In discussing the experiences of loss or trauma in the interview, disorganization is demonstrated by a change in the logical and linguistic structure of discourse, whereby facts in connection with loss or maltreatment were mixed up, denied, brought into question or falsified.

PSYCHOSOMATIC RESEARCH AND ATTACHMENT THEORY

From the perspective of attach-

ment theory four questions present themselves for psychosomatic research:

(1) Is the prevalence of insecure attachment models increased in patients with psychosomatic disturbances?
(2) Does insecure attachment correlate with a higher physiological arousal in reaction to various kinds of distress?
(3) Are associations to be found between insecure attachment and disturbances of affect regulation, which are linked to the etiology of psychosomatic illness?
(4) Are associations to be found between insecure attachment and problems in the relationship between the patient and the treating physician which are an aspect of disordered illness behavior?

In the following we shall address only the first and the third of these questions.

Differences in attachment representation in clinical and non-clinical groups: is the prevalence of insecure attachment increased in patients with psychosomatic illness?

The assumption that the quality of previous attachment experience has an influence on the coping with later developmental tasks is a fundamental postulate of attachment theory. Numerous studies confirm the connection between attachment behavior in early childhood and the later socioemotional development (summary in Schieche, 1996) in sum suggesting a more favourable course of psychological and social adaptation in children with a secure pattern of attachment in early infancy. It therefore seemed reasonable to examine the prevalence of secure or insecure attachment representation in clinical groups. Studies included infants and adolescents with conduct disorders (Crowell and Feldman, 1991; Rosenstein and Horowitz, 1993) as well as adults with various symptoms such as sleeping disorders (Benoit et al. 1992), depression (Patrick et al., 1994; Rosenstein and Horowitz, 1993), borderline disorders (Fonagy, 1993) and others (Crittenden et al., 1991; Fonagy, 1993). Van Wzendoorn and Bakermans-Kranenburg (1996) give a summary of 14 clinical studies in which a total of 439 test subjects were examined with the Adult Attachment Interview. Of these only 13% proved to have a secure attachment representation, 41% an insecure-avoiding and 46% an insecure-ambivalent attachment representation. The frequency of the insecure attachment pattern varied in the individual studies depending on the type of disorder. In borderline patients for example, a high proportion of subjects with an insecure-ambivalent attachment representation was observed (Fonagy, 1993; Patrick et al., 1994), while patients with sleeping disorders (Benoit et al., 1992) more frequently had an insecure-avoiding attachment representation.

There are almost no studies to

date on attachment representation in psychosomatic syndromes. One exception is a study by Slawsby (1995) that compared patients with chronic atypical facial pain and patients with neuralgia of the trigeminus nerve. Slawsby found a significantly higher prevalence of insecure attachment representation in patients with atypical facial pain. It might be conceived that the association of insecure attachment and psychiatric and psychosomatic pathology might be mediated by disturbances of affect regulation.

INSECURE ATTACHMENT, AFFECT REGULATION AND PSYCHOSOMATIC ILLNESS

The repression of affect expression may be considered as an important factor in the etiology and in the course of psychosomatic illness. The assumption of an inverse relationship between emotional expression and the physiological arousal in strenuous situations can be historically traced back to Alexander's concepts. Alexander (1949) assumed that physiological processes belonging to non-realized fight or flee reactions changed into a dysfunctional permanent activation if they were not realized by action.

The clinical findings that persons suffering from a psychosomatic illness often are not able to realize and express their feelings led Nemiah and Sifneos (1970) to the concept of alexithymia. The authors thereby characterized a personality structure marked by a disturbance in the experience and recognition of emotions. The concept includes the idea that in alexithymic individuals affects have lost their function as links between psychological and physiological processes. As descriptive characteristics of alexithymia, a narrowing and paralysis of the emotional and fantasy life are considered (Lesser, 1981). Authors of the French psychosomatic school (Marty and de M'Uzan, 1963) brought forward the cognitive characteristics of "operational thought" ("pensée operatoire"), which manifest themselves as a deficit of fantasy and an inner life centered on the external reality. Taylor (1994) sees the decisive aspect of alexithymia in deficiencies of interpersonal regulation of emotions. Patients with "higher" alexithymia showed a "dissociation of physiological and emotional reaction to strains as well as a high measure of sympathetic activation which could not be modulated by changing the environmental conditions". However alexithymic characteristics apply to the etiology of psychosomatic illnesses probably only in a portion of disturbances. Alexithymia therefore should be understood more generally as one component among several in a biopsychosocial model of illness.

Due to a lack of appropriate measures the concept of alexithymia for long has not entered psychophysiological research. Assumptions on an inverse link between affect expression and physiological activation were not systematically elaborated in alexithy-

mia research. However, the clinical validity of the concept together with the availability of a reliable measure (Bagby et al., 1994 a,b) has contributed to the most recent series of studies that have been carried out on this issue (Berenbaum and James, 1994; Lane et al., 1996; Lumley et al., 1996; Von Rad, 1983).

A concept in content related to alexithymia is the "repressive coping--style" (Byrne, 1961; Weinberger, 1990; Weinberger et al., 1979). Repression relates explicitly to the connection between affect regulation and physiological arousal. Repression is a habitual personality characteristic that regulates the processing of fear-arousing or stress related information (Weinberger, 1990). Persons with a repressive coping-style suppress fear--releasing information that could lead to a contradiction in self-perception. The opposite pole to a repressive coping-style builds up a "sensitive" coping mood. This is connected to a strengthened focus of consideration for fear-arousing information (Aspendorf and Scherer, 1983; Krohne and Rogner, 1985). The validity of the repression-sensitizing constructs has been proven in various psychophysiological tests: repression stands in connection with increased cardiovascular reactivity (King et al., 1990), increased plasma lipids (Niaura et al., 1992) and a reduced cellular immune competence (Esterling et al., 1990). A repressive coping-style is also connected to specific characteristics of autobiographical memories: persons with higher repression have less access to their childhood memories. On the whole they report fewer recollections, especially of negative experiences, and they need longer to recollect negative experiences than test subjects with a lower repression (Myers and Brewin, 1994).

The relationship between affect expression and physiological arousal has been repeatedly studied over the past years (Anderson, 1981; Sänger--Alt et al., 1989; Traue, 1989). Berry and Pennebaker (1993) concluded in a review paper that persons who repress emotional expression for whatever reason serve a high risk for a number of illnesses. However, no evidence was given to suggest that the repression of affects is a specific characteristic of an individual's functional or psychosomatic illness (Anderson, 1981) or that the selective repression of negative emotions in patients with psychosomatic illnesses is more frequent than in other persons (Sänger-Alt et al., 1989).

From the attachment theory perspective, the realization and expression of affects serves to conserve the relationship to the attachment person. Parents reacting openly and sensitively to the affective signals of the infant mediate the experience that the expression of affects – especially expression of negative affects – is a sensible and effective signal in order to receive support (Cassidy, 1994). If on the contrary the expression of emotions especially intended to attract the care of the attachment person (e.g., expressions of fear and anger) continuously leads to rejection, a style of

affect behavior develops that is connected to a minimizing of affect expression and a masking of negative emotions. In light of the origin of attachment behavior in insecure-avoiding infants, due to findings of Ainsworth et al. (1978) it can be assumed that the avoiding-attachment behavior develops as a consequence of rejection towards the infant's search for closeness and contact. The minimizing of attachment behavior and emotional expression, and the masking of negative affects allows the infant to preserve the closeness to the attachment figure, in spite of the rejection (Main, 1981; Main and Weston, 1981). The narrowing of emotional expression in insecure-avoiding infants can be understood as part of a communicative strategy signalized by the attachment person to indicate the child states no claims (Cassidy, 1994). Escher-Gräub and Grossmann (1983) report in connection to this an interesting observation. They tested the behavior of infants in their second year and their mothers during an episode of free play and discovered that the mothers of securely attached infants only participated in the play and supported this when the infants showed signs of negative affects (tension and annoyance). Contrary to this, the mothers of insecure-avoiding infants participated especially when the infants were satisfied and drew themselves back when negative affects were expressed. It can be concluded from this that in the interaction with the mother, infants with avoiding-attachment find less support than securely-attached infants in tolerating negative emotions and learning to cope with them.

Recent studies in family environmental conditions, in which alexithymia affect-behavior arises, show a connection between alexithymia and a low emotional expressiveness, as well as a slighter sense of security within the family relationships (Berenbaum and James, 1994). A correlation was also found between characteristics of alexithymia between infants and adolescents and their mothers (Lumley and Norman, 1996). Convergence can, therefore, be found between the observations of attachment research into dyadic affect regulation in childhood and the retrospective tests into the origins of alexithymia. Presently, however, there are scarcely any results of tests made looking into a connection between alexithymia and attachment representation in adulthood.

In a personal study concerning this question, taking as test subjects patients with idiopathic spasmodic torticollis, significant connections were found as expected: a secure--attachment representation correlated negatively and an insecure-avoiding attachment strategy positively with alexithymia characteristics (Scheidt et al., 1999). Further studies are necessary to clear the relationship between developmental roots of attachment representation and the clinically described disturbances of affect--regulation.

CONCLUSION

The application of attachment theory concepts and methods in psychosomatic medicine is still at an early stage. The aim of this summary is to indicate that important psychosomatic considerations could make progress with the help of attachment research. The attachment theory offers a scientific theory encompassing the basic central assumption of clinical psychosomatic practice. Previously developed methods for attachment research should be applied also in clinical research. Only then will it be possible to undertake an empirical examination into a pathogenetic model of psychosomatic illnesses based on psychological developmental concepts.

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