

INVESTIGATIVE REPORT

Atopic Dermatitis, Attachment and Partnership: A Psychodermatological Case-control Study of Adult Patients

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Adult patients with atopic dermatitis were examined from a psychodermatological perspective with respect to attachment attitudes and satisfaction with partnerships. In addition, the correlation between these variables and skin symptoms, as well as the skin-specific quality of life, was also studied. A total of 62 adult patients with atopic dermatitis were compared with a parallel control group with healthy skin (n=62). There were significant correlations between the patients' attachment characteristics on the one hand and the detriment to skin-specific quality of life on the other. In contrast, partnership satisfaction was not as severely impaired as expected; however, it showed significant correlations with attachment attitudes. Key words: atopic dermatitis; attachment; partnership; quality of life.

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Human skin is a barrier and interface organ between the external and internal world of the body and, beyond that, is important as a contact organ in non-verbal communication between people. At the same time, it is the detection site for sensory stimuli (such as touch) and a projection surface for internal, affective moods or emotions (such as blushing). Character-forming perceptions and experiences are mediated by skin contact in very early attachment situations (mother–infant contact for example, in nursing, stroking) and influence the emotional state of those involved (such as soothing or giving a feeling of safety). These attachment experiences mediated by the skin serve as the basis for the development of the individual's own “internal working model” (1); that is, they are part of the development of the person's self (Self Model) and characterize the image and expectations of others (Others Model) (2).

As a “sheath”, the skin is also a projection surface for internal processes, conflicts and affects (“skin self”) (3) and, moreover, plays an important role in the regulation of closeness and distance. The skin can also be a “projection screen” for one's own subjective thoughts of the

self; for instance, if inner convictions are made “legible” by body painting and tattoos, or if destructive subjective thoughts of the self lead to injuring the skin. Moreover, the skin plays a central role in partnership love relationships and in autoeroticism as an organ of lust and sensations in touching, caressing and intimacy.

Skin sensitivity and the skin-specific quality of life (QoL) are massively impaired by chronic skin diseases (4–6). Atopic dermatitis (AD) is one of the most stressful skin diseases, with itching and clearly-visible symptoms, such as excoriations, reddening and welt. It is a chronic skin condition with an increasing prevalence of 10–30% in children and 2–10% in adults (7). It manifests within the first year of life in 60% of cases (8). Connections between intrapsychic and interpersonal aspects of relationships (e.g. attachment patterns and attitudes and satisfaction in partnerships) within the context of skin diseases have been only marginally investigated to date. In a study on patients with psoriasis and AD, Niemeier et al. (9) showed a negative influence of these skin diseases on the exchange of intimacies and on the capability for orgasm. Rabung et al. (10) show a higher likelihood/frequency of insecure attachment tendencies among patients with AD, although no significant relationship with the severity of AD was found.

This aim of this study was to investigate the extent to which attachment attitudes and satisfaction in partnerships are related to the severity of symptoms, initial manifestation and detriment to the skin-specific QoL among patients with AD. We hypothesized that the presence and severity of AD affects partnership satisfaction, since the negotiation of intimacy and tenderness seemed to be complicated. Furthermore, we hypothesized that the presence of AD and an earlier onset (especially in the first year of life) has a (negative) influence on attachment attitudes in later life.

The study hypotheses were: (i) patients with AD tend more towards insecure attachment attitudes than a healthy-skin control group; (ii) satisfaction in partnerships is reduced among patients with AD compared with the healthy-skin control group; and (iii) attachment attitudes and satisfaction in partnerships are related to the severity of symptoms, the skin-specific QoL and the initial manifestation and duration of the AD. Insecure attachment attitudes and low satisfaction in partnerships are related to severely affected patients with AD and

patients with high impairment of skin-specific QoL. Patients with AD with early initial manifestation and high duration of AD are associated with insecure attachment attitudes and low satisfaction in partnerships.

METHODS

Sixty-two adult patients with AD (age range 21–59 years) were compared with a parallel (by gender, age, presence of a partnership) control group with healthy skin ($n=62$) in this retrospective case-control study. Recruitment of patients with AD was carried out at a psychosomatic clinic with psychodermatological focus, among practicing dermatologists and by advertisement. This setting was chosen to capture the clinical-inpatient, outpatient and the non-clinical sectors. Due to the limited numbers of participants ($n=62$) we did not differentiate between these sectors.

The control group was recruited in a non-clinical area via a notice posted on campus and via personal contact. The participants in the control group all had no current skin disease.

Inclusion criteria were: fluency in German, age between 18 and 65 years, and the diagnosis “atopic dermatitis” according to Hanifin & Rajka criteria (11) (assignment to the AD group). Exclusion criteria were: co-occurrence of psychosis, dementia or personality-disorder. The study was authorized by the ethics commission of the Human Medicine Faculty of the Justus-Liebig-University in Gießen. Participation was voluntary. All participants signed an informed consent statement for both participation in the study and publication of the anonymized results.

Measuring instruments

Sociodemographic data. The sociodemographic data recorded included, among other factors, age, sex, family status, partnership status, education and occupation.

Atopic dermatitis characteristics. The presence, duration and initial manifestation of AD were recorded. The severity of the AD symptoms was recorded using the Patient-Oriented SCORAD (PO-SCORAD) (12), which contains a lay-comprehensible translation of items of the standard questionnaire SCORing of Atopic Dermatitis (SCORAD-Index) (13). Three severity groups (mild 0–25, moderate 26–50, severe >50) were formed (14) based on the total score.

Skin-specific quality of life. The dermatological-specific QoL was recorded using the Dermatology Life Quality Index (DLQI) (15), which comprises 10 items, from which a total score is calculated (0–30). A high DLQI-value indicates severe detriment to QoL because of the skin disease.

Partnership satisfaction. Hahlweg’s Partnership Questionnaire (PFB) (16) was used to examine partnership satisfaction. This questionnaire, which is often used in couple therapy, consists of 30 items covering 3 areas: fight behaviour (FB), intimacy (I), and communication/points in common (COM). A total score (TS) is also calculated for satisfaction in the partnership. We examined the partnership satisfaction of the patients with AD at the time of recording. The PFB demonstrates a good (Cronbach’s alpha: α (COM)=0.88) and excellent (Cronbach’s alpha: α (FB)=0.93; α (I)=0.91; α (TS)=0.95) internal consistency, respectively. The test-retest reliability of the PFB with a sample of 50 partners, who were requested to complete the PFB on 2 occasions 6 months apart, were $r=0.68$ (FB), $r=0.74$ (I) and $r=0.83$ (COM). The PFB also shows good discriminant validity, predictive validity and construct validity (16).

Attachment. The German version of the Adult Attachment Scale (AAS) (17) is considered the standard questionnaire in recording

attachment behaviour and shows acceptable validity and focuses on resource-oriented aspects of attachment. It has 18 items (corrected 15 items) in 3 subscales: Close (nearness in relationships), Depend (on others) and Anxiety (over relationships) (18).

Statistics

All calculations were performed using SPSS for Windows, Version 13.0. The χ^2 -test was used to compare distributions. Differences between the 2 groups were calculated using the t -test for dependent (matched) samples (2-sided). If more than 2 groups were compared, a single-factor variance analysis (ANOVA) was performed. Relationships between variables were examined with bivariate correlations (Pearson). The significance level was selected to define an error probability of 5% ($p \leq 0.05$) as significant, of 1% ($p \leq 0.01$) as highly significant, and of 10% ($p \leq 0.1$) as tendentially significant.

RESULTS

Sample characteristics

The group of patients with AD ($n=62$) had a mean age \pm standard deviation (SD) of 28.66 ± 8.2 years, the matched, healthy-skin control group a mean age of 28.61 ± 8.3 years (t -test: $t(122)=0.033$, $p=0.974$). There were more women in both groups (women $n=39$, 62.9%; men $n=23$, 37.1%). Seventy-one percent of the participants in both groups had a partner.

The mean severity of symptoms among patients with AD (PO-SCORAD-value) was 48.9 ± 19.2 points, which is in the transitional range between moderate and severe. The mean detriment to skin-specific QoL (DLQI score) of 8.03 ± 6.8 points corresponded to the extent found earlier in other AD studies (5, 6). The initial manifestation of the AD showed approximately the distribution found in representative samples (8). Approximately 75% of patients first developed symptoms in childhood, mostly before the age of 7 years (Table I).

Attachment attitudes

Comparison of the group of patients with AD with the control group shows that the patients with AD have at least tendentially significantly less secure attachment attitudes than the control group. By comparing patients with AD (AD) with the control group (C), we found the following means for the AAS-scales (Fig. 1): Scale “Close” AD = 18.3 ± 5.3 vs. C = 20.0 ± 4.2) (t -test: $t(122)=-1.95$, $p=0.054$); Scale “Depend” AD = 19.3 ± 4.2 vs. C = 20.5 ± 3.4 (t -test: $t(122)=-1.87$, $p=0.064$); Scale “Anxiety” AD = 12.1 ± 4.6 vs. C = 10.6 ± 3.6 (t -test: $t(122)=1.98$, $p=0.05$). Thus, the patients with AD in this study had greater anxiety of being abandoned/not loved (Scale “Anxiety”), less trust of/in others (Scale “Depend”), and a lower degree of nearness to feel comfortable (Scale “Close”). Moreover, there were significant correlations between attachment characteristics of the patients with AD on the one hand and the detriment to skin-specific QoL

Table I. Descriptive characteristics of the study sample

	Patients with AD (n=62)	Control group (n=62)
Age, years, mean ± SD	28.66 ± 8.2	28.61 ± 8.3
Sex, n (%)		
Men	23 (37)	23 (37)
Women	39 (63)	39 (63)
Partnership, n (%)		
Yes	44 (71)	44 (71)
No	18 (29)	18 (29)
PO-SCORAD, mean ± SD	48.9 ± 19.2	
Mildly afflicted, n (%)	8 (13)	
Moderately afflicted, n (%)	23 (37)	
Severely afflicted, n (%)	31 (50)	
Initial manifestation, years, mean ± SD	8.1 ± 12.4	
1 st year of life, n (%)	30 (48.4)	
7 th year of life, n (%)	15 (24.2)	
After the 7 th year of life, n (%)	17 (27.4)	
Duration of disease, years, mean ± SD	20.01 ± 8.2	
DLQI, mean ± SD	8.03 ± 6.8	

DLQI: Dermatology Life Quality Index; PO-SCORAD: Patient-Oriented Scoring of Atopic Dermatitis; SD: standard deviation.

(DLQI) and the severity of symptoms (PO-SCORAD) on the other. Attachment insecurities were associated with increased detriment to the skin-specific QoL and greater symptom severity. Contrary to expectations, however, no relevant connection was found between the initial manifestation of AD or the duration of the disease and the AAS (Table II).

Partnership satisfaction

No significant difference was found in the comparison (means) of patients with AD with partners and those in the healthy-skin control group with respect to satisfaction with the partnership (Scale “Fight behavior” AD = 5.7 ± 4.9 vs. C = 4.7 ± 3.5 (*t*-test: *t*(86) = 1.11, *p* = 0.269); Scale “Intimacy” AD = 22.5 ± 4.9 vs. C = 23.2 ± 4.9 (*t*-test: *t*(86) = -0.54, *p* = 0.594); Scale “Communication/points in common” AD = 21.5 ± 4.7 vs. C = 23.2 ± 4.5 (*t*-test: *t*(86) = -1.67, *p* = 0.098); Total score AD = 68.2 ± 11.0 vs. C = 71.5 ± 11.0 (*t*-test: *t*(86) = -1.37, *p* = 0.174)). On average, patients with AD therefore do not experience their partnerships as either more or less satisfactory than people with healthy skin. There were also no significant correlations found in the group of patients with AD between partnership

Table II. Pearson correlations in adult attachment scale

	Patients with atopic dermatitis						Control group					
	Depend		Close		Anxiety		Depend		Close		Anxiety	
	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>
DLQI	-0.410	0.001	-0.405	0.001	0.487	0.000						
PO-SCORAD	-0.361	0.004	-0.380	0.004	0.309	0.014						
Initial manifestation	-0.156	0.226	0.172	0.182	-0.034	0.792						
Duration of disease	0.090	0.485	0.145	0.259	0.047	0.716						
PFB – Total score	0.436	0.003	0.425	0.004	-0.414	0.005	0.318	0.035	0.107	0.490	-0.054	0.727

DLQI: Dermatology Life Quality Index, PO-SCORAD: Patient-Oriented Scoring of Atopic Dermatitis, PFB: Partnership Questionnaire, *r*: Pearson product-moment correlation coefficient; *p*: *p*-value.

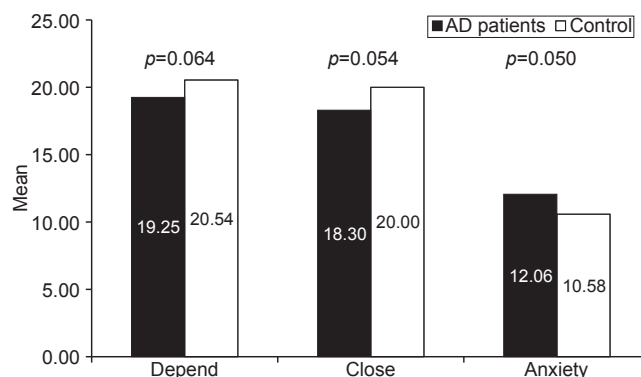


Fig. 1. Means (*t*-test) of the Adult Attachment Scale: comparison of patients with atopic dermatitis (AD) and healthy-skin controls.

satisfaction (total score) on the one hand and initial manifestation (Pearson correlation: *r* = -0.10, *p* = 0.516), duration (Pearson correlation: *r* = -0.13, *p* = 0.420) and severity (Pearson correlation: *r* = -0.15, *p* = 0.346) of AD on the other hand. Moreover, no significant correlation with detriment to skin-specific QoL was found (Pearson correlation: *r* = -0.13, *p* = 0.935).

Partnership satisfaction (PFB-Total Score) did, however, appear to play a role with respect to attachment attitude (AAS). Clear and significant correlations were found in the group of patients with AD, whereas only the correlation between AAS-depend and PFB-Total score showed significance in the healthy-skin control group (Table II).

We also analysed whether there are differences between patients with AD in partnerships and those without, in relation to their attachment attitude (AAS), severity of AD (PO-SCORAD) and skin-specific QoL (DLQI).

Patients with AD with partners showed more secure attachment attitudes (compared with patients with AD without partners), whereby only the difference in the Scale “Anxiety” (about being abandoned/over relationships) could be proven with statistical significance (Scale Anxiety *t*-test: *t*(60) = -2.15, *p* = 0.035; Scale Close *t*-test: *t*(60) = 1.65, *p* = 0.103; Scale Depend *t*-test: *t*(60) = 1.58, *p* = 0.116) (Fig. 2). Severity of symptoms and skin-specific QoL did not differ significantly (PO-SCORAD *t*-test: *t*(60) = 0.79, *p* = 0.431; DLQI *t*-test: *t*(60) = -0.14, *p* = 0.889).

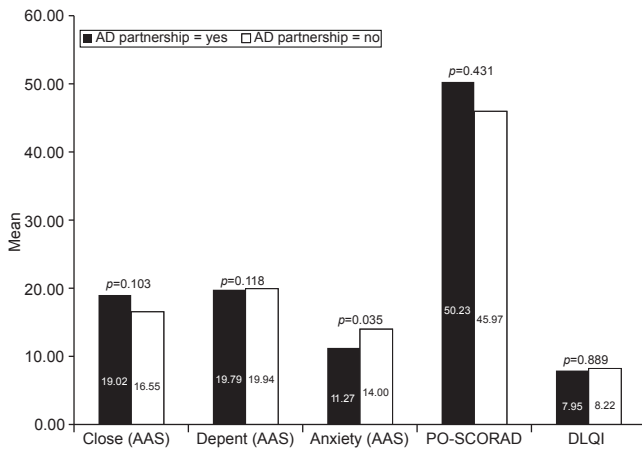


Fig. 2. Means comparison (*t*-test) with respect to Adult Attachment Scale (AAS), Patient-oriented Scoring of Atopic Dermatitis (PO-SCORAD) and Dermatology Life Quality Index (DLQI) for patients with atopic dermatitis (AD) with and without partners.

In summary, the first hypothesis was confirmed, at least in tendency, while the second hypothesis was rejected. The third hypothesis was partially confirmed.

DISCUSSION

The results of this study highlight the need for differentiated analysis of the correlations between AD and attachment or partnership. We found no significant correlation between the onset of AD at an early age (up to the third year of life) and insecure attachment representatives, although this might be considered likely and logical from the perspective of Bowlby's attachment theory (overview in (19)). Rabung et al. (10) were also unable to confirm these hypotheses in their study of 124 patients with AD. The authors did, however, as in our study, observe that patients with AD in general showed less secure attachment patterns. It thus appears that the time at which AD first becomes manifest is less important than the fact that the patient has the disease at all. The duration of the disease also does not appear to be of particular importance. Whether there is a "particularly characterizing" phase (say the first year of life) in which the concurrent development of attachment patterns and the initial manifestation of AD leads to particularly decisive changes in the development of self, remains to be seen. If this were the case, later "compensation", perhaps in the sense of adaptation, must occur. This would offset any potential differences between patients with AD with initial manifestation in childhood and adulthood. A study of children with AD using attachment-specific examination procedures (for example in "strange situations" (19)) could be helpful in this respect.

Nonetheless, our study showed that patients with AD at least tend to have less secure attachment attitudes (see (10)).

The clear relationships found between attachment attitudes and severity of AD and detriment to skin-specific QoL can be viewed as important knowledge gained from this study. The correlations do not statistically enable proof of direct causality, but the results can be seen sequentially in content. In the study group the age at onset and duration of the disease appeared to have little or no effect on the attachment attitude of the patients. This seems to suggest that the attachment-undermining component could be the onset and development of AD in and of itself. This onset and development could be experienced as stress and lead reactively to insecure attachment attitudes. Studies in attachment research (see (19, 20)) have shown that attachment patterns may be modified by illness or trauma. The converse assumption that less securely attached people are more likely to develop AD (in the sense of a neurodermitic personality) has been discussed in the past, but is considered not very likely due to heterogeneous findings (8, 21).

Insecure attachment attitudes and severity of symptoms, as well as skin-specific QoL are significantly correlated. This correlation does not, however, prove a causal relationship. On the one hand, severe AD with severe itching could lead to problems in the interpersonal and intrapsychic system (e.g. disgust and rejection of one's own skin, auto-aggression (massive scratching), partnership problems, nearness-distance conflict). On the other hand, social factors, such as partnership conflicts, could influence attachment security, which could, in turn, lead to more attachment anxieties and thus increased intrapsychic stress. The significant correlations between partnership satisfaction and attachment security found in this study would support that view. Stress has itself been described as an important mediator in attacks of AD (22).

It is noteworthy that the patients with AD in this study were not as severely impaired in their partnership satisfaction as one might expect based on the markedly impaired psychosocial functions of the skin. This is also congruent with other studies available thus far on the topic of skin diseases and sexuality/partnership (e.g. 5, 9, 23). Nevertheless, sexuality and partnership are important topics for the psychosocial/medical care of patients with AD. This seems all the more important since our study suggests an influence of partnership satisfaction upon skin-specific QoL via the significant relationship to attachment security. Niemeier et al. (9) also showed that the exchange of intimacies in patients with AD of both sexes, and the orgasm capacity of female patients were significantly reduced. It must be noted, however, concerning the method, that only patients with AD with partners were questioned about their satisfaction in the partnership. Therefore it cannot be ruled out that these partnerships are characterized by a particular sensitization with respect to AD. The partnership satisfaction was also recorded only from

the patients' perspective. The perspective of the healthy partner remains unknown. By comparing patients with AD with partners and neurodermatitic singles, descriptive differences were found in attachment security. This can be statistically confirmed with respect to the scale "Anxiety (about being abandoned)". The existence of a partnership could thus be a stabilizing factor that mediates attachment security.

The correlations between attachment attitudes and AD factors (severity and QoL) appear to be interesting from a psychosomatic-psychotherapeutic point of view: psychotherapy focused on attachment security could supplement the (psycho-) dermatological therapy concept and thus contribute to improvement in the therapeutic target variables of symptom severity and QoL. Clinical attachment research shows that attachment patterns and attachment security have important influence in the psychotherapeutic process, and that attachment-specific elements have entered into specific and unspecific psychotherapy concepts (overview in (24)). Moreover, independent attachment-oriented treatment concepts have developed (e.g. mentalization-based therapy (25), Brief Attachment Based Therapy (26)).

The effects of psychological interventions on AD have been investigated in only a few studies. In 2007 Chida et al. (27) published a meta-analysis of 13 randomized controlled trials (8 included) on the effectiveness of psychological interventions in patients with AD. The study revealed that intervention had a significant ameliorating effect on eczema severity, itching intensity and scratching in patients with AD. According to the authors, further studies are required to obtain a definitive statement and to obtain a broad evidence-base.

The results of the present study do, however, justify discussion of the possibility of supportive psychodermatological/psychotherapeutic treatment in the sense of holistic treatment, which means a common treatment or at least a clinical diagnostic by a dermatologist and a psychotherapist.

The authors declare no conflicts of interest.

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