

Differences in body image between anorexics and in-vitro-fertilization patients: a study with Body Grid

Unterschiede im Körperbild von Anorektikerinnen und In-vitro-Fertilisationspatientinnen: eine Studie mit dem Körper Grid

Abstract

Objectives: The purpose of the investigation was to explore the body image disturbance of anorexics and in-vitro-fertilization patients (IvF-patients) with Body Grid and Body Identity Plot.

Methods: The paper reports on an empirical study conducted with 32 anorexic patients and 30 IvF-patients. The structure of the body image was derived from the Body Grid, an idiographic approach following the Role Repertory Grid developed by George A. Kelly [17]. The representation of the body image and the degree of body-acceptance is represented graphically.

Results: By the Body Grid and Body Identity Plot measures we were able to identify important differences in body image between anorexics and IvF-patients.

Conclusion: The tendencies of dissociation in the body image of anorexics which we found must be seen in the sense of a specific body image disturbance which differs significantly from the body-experience profile of IvF-patients. With the grid approach it was possible to elicit the inner structure of body image and determine the acceptance of the body and integration of single body parts.

Keywords: Body Grid, Role Repertory Grid, body image disturbance, anorexics, in-vitro-fertilisation

Zusammenfassung

Zielsetzung: Erhebung der Störungen im Körperbild von Anorektikerinnen und In-vitro-Fertilisationspatientinnen (IvF-Patientinnen) mit Körper Grid und Körperidentitätsgrafik.

Methoden: Studie an 32 anorektischen und 30 In-vitro-Fertilisationspatientinnen. Die Struktur des Körperbildes wurde mit dem idiografischen Ansatz des Körper Grid (entwickelt in Anlehnung an den Role-Repertory Grid von George A. Kelly [17]) erhoben. Die Integration des Körperbildes und der Grad der Körperakzeptanz wurde grafisch darstellbar gemacht.

Ergebnisse: Mit dem Körper Grid und der Körperidentitätsgrafik war es möglich, bedeutsame Unterschiede im Körperbild von Anorektikerinnen und In-vitro-Fertilisationspatientinnen zu erheben.

Schlussfolgerungen: Die im Körperbild von Anorektikerinnen gefundenen Dissoziationstendenzen können als spezifische Störung des Körperbildes angesehen werden, wobei sich signifikante Unterschiede im Körperbild von Anorektikerinnen und IvF-Patientinnen fanden. Mit dem Körper Grid war es möglich, die innere Struktur des Körperbildes zu erheben und den Akzeptanzgrad des Körpers wie auch die Integration einzelner Körperteile darzustellen.

Schlüsselwörter: Körper Grid, Role-Repertory-Grid, Körperbildstörung, Anorexia nervosa, In-vitro-Fertilisationspatientinnen

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Introduction

The psychosomatic literature contains numerous references to body image disturbance in anorexics. Thomä ([36], p. 270) described anorexia as a conflict between "ego ideal" and "body ego." The anorexic directs her psychic defence against the sexual body, the instinctual and desiring aspect of the body, and thus against the genital organs and sexual functions. Therefore, the desired aspects of the body have to be controlled. Moreover, the anorexic tries to avoid becoming a woman by rejecting nutrition because a sexual body and the genital organs embody for her the negative image of a reference person, often the mother. Although contemporary authors like Hirsch [13], Küchenhoff [19], Lang [20], Selvini Palazzoli [29] consider the rejection of sexuality and femininity as a core aspect of anorexia nervosa: Main symptoms to diagnose anorexia nervosa are the body image disturbance and the secondary amenorrhoe (see ICD-10 [16]). The perception of the body of infertile women is although often characterized by a dissociation of body and self. Brähler [1] noted that infertile patients tend to have a specific attitude toward their own body. This phenomenon often takes on the shape of a heightened need for body control, with patients perceiving their body as a "separate entity" ([1], p. 185). Here, "the struggle against one's own body, which is experienced as a defective machine, serves ... to cope with the major narcissistic injury" ([1], p. 183) which infertility means for many patients. The diagnosis of infertility accordingly entails changes in women's self-image, which may be associated with a marked experience of deficiency. One possibility of dealing with the narcissistic injury bound up with this perceived loss of control is to alter the manner in which the body is experienced. The body tends no longer to be experienced as an element of the self and is instead increasingly perceived as an external object. Moreover, individual areas of the body tend as a rule to become the object of a heightened focus of attention and are thus no longer experienced as integrated part of the body image. According to Hölzle ([14], p. 23), the consequence is that the "lower abdomen is (split off) from the experience of the body as a whole, coming to be seen as an object in need of repair." Here, a medical intervention like in-vitro-fertilization also serves the purpose of regaining the lost control over the body ([14], p. 23).

These - frequently described - impairments of the self-image and body image associated with infertility have, however, been confirmed in only in part in empirical studies. Seward et al. [30] found no significant differences in the personality characteristics of infertile women compared with fertile women of the same age group. Other authors, however, report unfavourable self-assessments and emotional impairments on the part of women unable to bear children (overview in Matthews and Matthews [22]; Ulrich [40]). In 1991 Strauß first investigated the body experience of 174 women with different infertility diagnoses using the questionnaire (FbeK) [34] conducted another study with 32 infertile women, finding no particu-

lar indications of impairment as regards a negative body experience. Compared with the female standardization sample, his infertile patients even described themselves as more attractive than average and self-assured as regards their own body. They also indicated low levels of negative body-related perception ([34], p. 20). But in another study infertile patients tended to show below-average values on the scale for accentuation of the body/sensibility [33], i.e. they showed no heightened attention to bodily processes and the external aspects of the body. Strauß attributed this surprising finding to the often-described socially compliant response behaviour of this patient group [23]. And in a study conducted with the Gießen-Test, Kemeter [18] showed that patients with a desire for children represented themselves as distinctly overcontrolled.

If we follow these authors who describe such dissociation tendencies of body and self for some infertility patients, the question occurs how these patterns of body experience can be assessed without being unduly influenced by the tendency to respond in a manner regarded as socially desirable.

Our aim was to develop an idiographic approach - Body Grid - to ascertain the individual perception pattern of the body and single body parts. Furthermore, we like to get some insight of the structure of the body image which is depicted in form of a readily accessible graphic making them useful for therapeutic focussing, treatment and experience, tasks that rarely have been achieved by conventional methods like questionnaires or so-called projective tests. With the Role Construct Repertory Test (Rep-Grid) George A. Kelly [17] has developed a diagnostic tool to evaluate the personal constructs of an individual person, i.e. the "individual dimensions of subjective experience" ([26], p. 1). An interesting feature of the repertory grid approach is that it combines aspects of both research strategies: 1. the idiographic assessment, which strives to reveal unique dimensions of a given respondent's outlook, and 2. nomothetic research, which seeks general patterns across different groups of patients [25]. By contrast to nomothetic approaches the idiographic approach of the Rep-Grid allows to elicit data on the individual semantic space "body" in the sense of an "externalization of internal contents of experience" ([41], p. 57). Thus, the format of the Rep-Grid and the Body Grid essentially guides the respondent in constructing his own questionnaire (by eliciting the individual's own constructs of body experience), while permitting comparisons across different patients groups. Then these constructs - elicited by the grid - can be categorized by a number of reliable systems of content analysis [25] and be used as a basis of more extensive quantitative methods especially for the construction of new valid questionnaires.

Assessment of body image disturbance

The great majority of measurement techniques of body image disturbance have focused on two aspects of body image: a perceptual component, commonly referred to

as size-perception accuracy (i.e., estimation of body size) and a subjective component, which entails attitudes toward body size/weight, other body parts, or overall physical appearance [7].

The size-estimation accuracy of the body image in anorexics can be traced to the study by Slade and Russell [31] that observed greater size overestimation in anorexics than among controls. These findings were extended and elaborated, using a variety of assessment procedures. In recent years, evidence has mounted, however, suggesting that size overestimation is not specific to the anorexic population [39], [37]. It can be concluded that size-estimation accuracy of the body and body-parts are not caused only in perceptual components but although in cognitive and affective aspects which is called subjective components [38].

At the same time a lot of questionnaires are developed [39], [37] which assess the attitudes toward the body or single body parts. Questionnaire measures generally focus on a broader conception of subjective components. But a problem of all questionnaire measures of body related attitudes is the content validity. Questionnaires are always retrospective and not idiographic. By contrast projective or unstructured tests like "thought listing" are characterized by more content validity than questionnaires [15] but they are difficult to evaluate. However, the grid approach allows a so called "online"-measurement of cognitive and affective assessment by generating the individual constructs of the patient. Therefore, the grid approach combines a high reliability and validity with the methodical advantages of a quantitative approach.

Excursus: The Theory of Personal Constructs and Role Repertory Grid (Rep Grid)

The Role Repertory Grid (Rep Grid) is based on the Theory of Personal Constructs of George A. Kelly. George A. Kelly's Theory of Personal Constructs is embedded into the current discourse of constructivist and constructionist approaches to psychology. The Theory of Personal Constructs could be understood as a very early version of a psychology from the standpoint of the subject ([43], p. 325). 1955 Kelly developed the Repertory Grid Technique (or Rep Grid) as an implementation of his theory for studying personal and interpersonal systems of meaning [26]. A Rep Grid is made up of columns and rows in which every square contains a piece of information. In clinical psychology, especially in psychotherapy, the relevant personal constructs are commonly evaluated based on the roles (classically named "elements") that a person meets in the course of his development ("mother", "father", "partner", "best friend", "a teacher who had a positive influence", etc). Apart from roles respectively persons, elements can also take the form of feelings, situations, attitudes, illnesses, and body parts. In a further step the constructs are gathered. There are a lot of methods for gathering the personal constructs - the

unique system of interconnected meanings that define the patient perceived relationship to others (i.e. the elements). In its simplest form, the Repertory Grid requires the respondent to compare and contrast successive sets of three elements (e.g., significant people), and formulate some important way in which two of the figure are alike, and different from the third. For example, if prompted with the above triad, a person might respond, "Well, my mother and I are very trusting of people, whereas my dad is always suspicious of their motives" [25]. This basic dimension, trusting of people vs. suspicious of their motives, would then be considered one of the significant themes or constructs that the person uses to organize, interpret, and approach the social world, and to define his or her role in it. By presenting the respondent with a large number of triads of varying elements (e.g. best friend, a dislike person et cetera), the Rep Grid elicits a broad sampling of the personal constructs that constitute the person's outlook on life and perceived alternatives. For example, using the triadic comparison method described above, a respondent might generate a set of constructs (e.g. trusting vs. suspicious; young vs. old, and so on), which might be arrayed in the rows of the Grid. Then the patient is asked to rate each element in terms of each construct pair (emerged and contrast pole) by means of a 7-point scale. For instance, "mother" might be seen as 1 on trusting vs. suspicious, representing very trusting, whereas "father" might be placed at 5 on this same scale, representing moderately suspicious (for detailed information see Riemann [26], Schoeneich [28]). Although the specific element ratings on important constructs are often informative in themselves, it is typically more helpful to conduct a comprehensive analysis of the Grid to discern large patterns [25]. This might involve correlating and factor analyzing the matrix of ratings to see at a glance which constructs "go together" for the respondents [25]. Furthermore, the matrix of a grid allows to evaluate the distances between the elements. The element distances can reveal clinically relevant findings. Isolation or proximity of certain elements (especially of self and ideal self) can produce diagnostic clues and serve the operationalization of certain concepts, such as the concept of the "self-identity plot" (SIP, [21]).

Methods

The Body Grid: procedure and illustrating clinical case

We developed a Body Grid to assess the body image and its disturbances. Earlier work in this field stems from Feldman [9], Button [3], [6], [4], [5], and Fransella et al. [11], [10], who already developed body grids e.g. for psychotherapeutic work involving patients with eating disorders (mostly anorexia). By contrast to the earlier works from other authors we used only body parts and two complex concepts of the body (real and ideal body). Using the terminology of PCP (personal construct psycho-

														Body-Grid						
														Emergent Pole				Constrast Pole		
														←				→		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	1	2	3	4	5	6	7
Real Body	Skin	Heart	Brain	Muscles	Breast	Uterus	Vagina	Clitoris	Belly	HIP	Thighs	Bottom	Ideal Body							
6	2	3	4	5	1	5	5	6	3	6	6	6	2	protective				exposed		
2	2	1	1	2	2	7	7	7	2	4	4	5	2	vivid				passiv		
2	2	3	1	1	4	6	5	4	5	4	4	4	1	conscious				chaos		
5	5	3	2	5	5	7	4	4	6	6	7	7	1	taut				slack		
6	2	2	3	3	1	1	1	4	1	4	4	4	1	able to suckle				neutral		
5	4	3	4	4	3	1	1	4	2	2	4	4	4	able to bear children				useless		
2	1	3	3	6	2	3	2	1	1	6	6	6	2	sensitive				insensitive		
2	1	1	2	6	2	2	2	1	2	6	4	4	3	excitable				unexcitable		
7	2	3	3	4	2	1	2	4	1	3	4	4	1	pregnant				infertile		
3	4	4	4	4	5	4	4	4	2	2	2	2	7	broad				small		
2	3	4	4	6	2	2	3	4	1	2	2	1	6	fleshy				low		
2	5	4	6	6	4	4	4	4	1	2	2	1	6	fat				thin		
7	4	4	4	4	4	6	6	4	5	4	4	4	1	fertile				incapable		

Figure 1: Completed Body Grid matrix of a 37-year-old IVF-patient

logy), the body parts and organ systems represent the "elements" of the grid (see Figure 1, for illustrating the procedure we present a completed body grid matrix of an IVF-patient). On the upper side of the matrix we plot those special body parts for which we want to know the psychological representations by anorexics and IVF-patients for the empirical evaluation of the characterisation in literature outlined above. The following body parts were regarded as important for the body image of anorexic and IVF-patients: skin, heart, muscles, brain; the female genital organs associated with sexuality and fertility: breast, uterus, vagina, clitoris, and the so-called problematic zones of the female body: belly, hip, thighs and bottom. The element 'real body' is used to operationalize primarily the subjective pole of experience of the body-self representation or, in other words, the 'being a body' as it was elaborated by the phenomenologists [24]. The element 'ideal body' was intended to elicit the sociocultural norms and values that are attributed more to the objectional experience pole of the body-self - the 'having a body' [24]. Since our experience with different patients showed that the triadic method, as commonly used with the Role Repertory Grid, proved too difficult for most patients whereas the comparison of two elements (dyadic method) did not make problems, the constructs were assessed by means of the dyadic method. We think, that the emergence of significant body related constructs means a great psycholinguistic challenge for patients since the body-related construct system results mainly from pre-verbal and often unconscious imaginations. In our study, each element is compared with the real body element. The patients name differences or similarities with it ("Please, try to think of a characteristic of the skin, which the skin has either in common with the real body, or differentiates it from the real body"). Constructs are

preferably adjectives, characterising the element with regard to the real body. In the next step, for each construct its contrast pole is assessed, the patient being asked to name the opposite of the construct without reference to the element for which this construct had emerged.

The subject is then asked to rate each element in terms of each construct pair (emerged and contrast pole) by means of a 7-point scale. The whole procedure of assessment usually takes between 30 and 45 minutes.

The Body Identity Plot

From the scores of the grid-matrix distances between the elements can be calculated as is depicted in Figure 2. Inter element distances in a grid indicate how similar or dissimilar the subject perceived these elements, e.g. the body parts. The inter element distances can reveal clinically relevant findings. Divergence or convergence or in a more interpretative denomination "dissociation" or "proximity" of certain elements (especially of self and ideal self) can produce diagnostic clues and have been used successfully for some time now in investigating interpersonal relationships in a clinical context [21], [21], [27]. The Body Identity Plot is used to demonstrate the relation between the bodyself-concept and the other representations of significant body parts. In the Body Identity Plot two orthogonal axes represent the distances from real body (a-axis) and ideal body (b-axis). Using these parameters, however, the question is where to set the point for the cut-off values permissible for a psychological interpretation of distances. We use the cut-off values proposed by Hartmann [12] to investigate the distances of the Body Grid. Thereby the dimension of the grid matrix used in the present study yields a range between -1.60

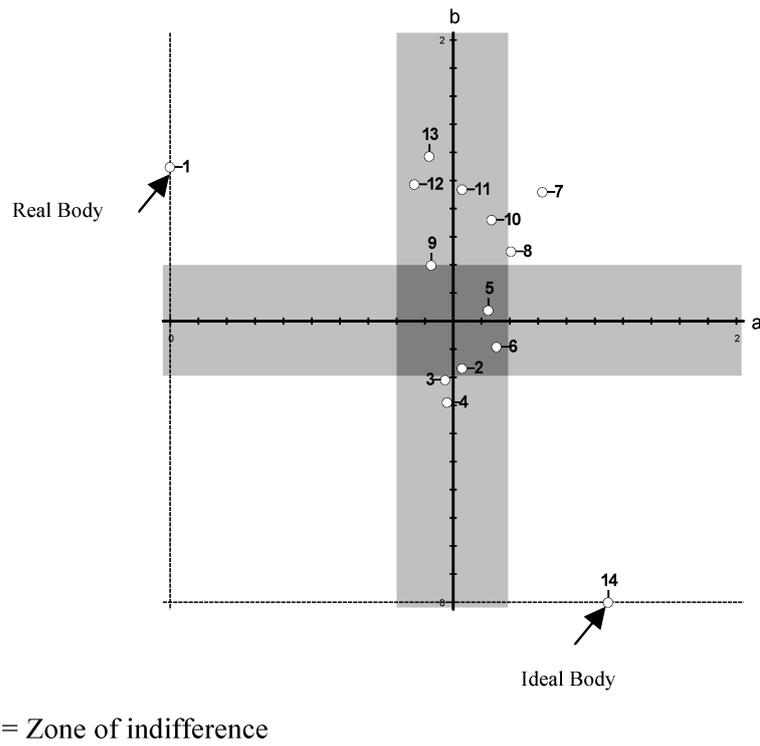


Figure 2: Body Identity Plot of a 37-year-old IVF-patient

and +1.69 which we refer to as the range of indifference. As a large dissimilarity of a body part to the real body element or the ideal body element we regard the range between the lowest value and -1.60. As a further operationalization we regard a short distance between an organ and body part and the global concept "ideal body" as an expression of the acceptance of this body part, while a great distance we regard indicating an attitude of rejection or discontentment with the body part in question. A short distance between an organ or body part and the global concept "real body" we understand as an expression that the organ in question is integrated within the notion of the "real body" as a whole. A large dissimilarity between a body part and the real body is interpreted as a tendency of dissociation of this body part. Furthermore, in our expectation, such a dissociation of single body parts indicates a loose mental representation of the body image. Finally, the location of body parts which are located in the zone of indifference could be interpreted as a lack of differentiation or a psychic non-representation of these body parts.

In analogy to the literature where the distance between the elements real self and ideal self are interpreted as a measure of the self conception or self-image or self-esteem, we conducted an analysis of the relationship between the elements real body and ideal body, which is based on the assumption that divergence or dissociation of these two body conceptions may be seen as discontentment/dissatisfaction with one's body. Figure 2 shows a Body Identity Plot displaying a divergence between real body and ideal body.

The elements (i.e. body parts) are numbered from 1 to 14: 1 real body, 2 skin, 3 heart, 4 brain, 5 muscles, 6

breast, 7 uterus, 8 vagina, 9 clitoris, 10 belly, 11 hip, 12 thighs, 13 bottom, 14 ideal body.

Corresponding to theories on body perception of IVF-patients described above, we interpret this Body Identity Plot as dissociation of special body parts associated with sexuality and fertility: uterus (7) and vagina (8) are located far away from real and ideal body, whereas clitoris (9) and breast (6) are located in the zone of indifference. This could be an indicator that breast and clitoris are less associated with infertility and more with sexuality and that this patient differentiate her sexuality live and functions from their fertility function. Belly, hip, thighs and bottom - the so-called problematic body parts of women - are located far away from the ideal body which could be interpreted as the common negative body satisfaction which could be observed frequently by women in western societies. Brain and heart are situated close to the ideal body e.g. the subject is satisfied with these body parts. These body parts correspond to the ideal of the patient. Secondly, we found in this Body Identity Plot a dissociation of real and ideal body, which are located far away from each other. A dissociation between real and ideal body - in terms of large distance between this two elements - could be understood as a negative body acceptance and idealisation of ideal body.

Sample

32 anorexic in-patients undergoing an indoor psychosomatic-psychotherapeutic treatment on the Department of Internal Medicine-Psychosomatics, Charité School of Medicine, Humboldt University, Berlin, were assessed with the Body Grid. The Body Grid was completed either

within two days prior to or two days following their admission for inpatient treatment. All subjects had met DSM-III criteria for anorexia nervosa. The age of anorexic patients ranged from 18 to 33 years (mean 26.0 ± 3.8). The body-mass-index ranged from 14 to 17.5 (mean 16.8). From 30 patients under IvF-treatment (at the beginning of the first IvF-treatment cycle) on the Clinic of Gynaecology, Charité School of Medicine, Humboldt University, Berlin, a Body Grid are gathered.

The age of IvF-patients ranged from 22 to 44 years (mean 32.7 ± 5.6). The mean duration of infertility was 3.1 year. The anorexic and IvF-patient group differed significantly on age ($t = -5.298$, $p = .001$).

Hypotheses

In the presented study we aim to test a range of current hypotheses concerning the body image disturbance of anorexic and IvF-patients described in the literature. Especially differences of both groups in the extent of integration of the body image and tendencies of dissociation of single body parts should be evaluated.

On this basis the following similarities and differences of body image perception in anorexic and IvF-patients were expected:

1. Both groups are discontent with their bodies and evaluate the real body negatively.
2. Both groups show dissociation tendencies and negative connotation of specific body parts.
- 2a. Both groups show a dissociation of body parts associated with sexuality.
- 2b. Only the anorexic patients show a dissociation of body parts associated obesity.

Hypothesis 1: Body dissatisfaction

The critical attitudes toward the body and polarised judgement of anorexic and bulimic patients are expected be reflected in large average element distances between "real body" and "ideal body" with regard to Hartmann's zone of indifference ≤ -1.60 and $\geq +1.69$. Proceeding on the hypothesis that both groups - anorexics as well as IvF-patients - are discontent with their bodies, we calculated the average distances between real body and ideal body for both groups of patients - anorexics and IvF-patients.

Hypothesis 2a-b

Dissociation tendencies for special body parts linked with obesity and sexuality and low integration of the body image will be shown in large inter element distances between body parts associated with obesity or sexuality and the real or ideal body.

Results

Hypothesis 1: Body dissatisfaction

We found only a large average distance - according to Hartmann's zone of indifference ≤ -1.60 and $\geq +1.69$ - between real body and ideal body in anorexic patients (-1.643), whereas IvF-patient do not localized the real body far away from the ideal body (-1.469) as it could be illustrated by the Body Identity Plot shown in Figure 2 (see Table 1).

Table 1: Differences between anorexics and IvF-patients for the average distances real body/ideal body

	Distances	
	real body/ideal body	
	Anorexic	IvF
N	32	30
Average distances	-1.643*	-1.469

Hypothesis 2a: Dissociation of genital organs

The hypothesis that anorexic and IvF-patients show tendencies for dissociation of the genital organs from the real and the ideal body in terms of large average distances of these organ representations from the real body and ideal body is only supported for the group of anorexics. The anorexic patients showed large average distances between real body and genital organs (-1.616) according to Hartmann's zone of indifference as well as large average distances between ideal body and genital organs (-1.789) (see Table 2).

Table 2: Differences between anorexics and IvF-patients for the average distances ideal body/body parts associated with sexuality

	Distances	
	ideal body/body parts associated with sexuality	
	Anorexic	IvF
N	32	30
Average distances	-1.789*	-1.605*

By contrast the IvF-patients show only a large average distances between ideal body and genital organs (-1.605) - with regard to Hartmann's zone of indifference ≤ -1.60 and $\geq +1.69$ - i.e. the genital organs are localized far away from the ideal body (see Table 2), but there are no large

average distances between genital organs and real body (-0.908) (see Table 3).

Table 3: Differences between anorexics and IvF-patients for the average distances real body/body parts associated with sexuality

	Distances real body/body parts associated with sexuality	
	Anorexic	IvF
	N	32
Average distances	-1.616*	-0.908

Hypothesis 2b: Dissociation of body parts associated with obesity

Anorexic patients show the expected large average distances of body parts associated with obesity to the ideal body according to Hartmann's zone of indifference (see Table 4) (-1.625 in anorexics), whereas IvF-patients show only a tendency of dissociation of these body parts but not large average distance of these body parts (-1.574).

Table 4: Differences between anorexics and IvF-patients for the average distances ideal body/body parts associated with obesity

	Distances ideal body/body parts associated with obesity	
	Anorexic	IvF
	N	32
Average distances	-1.625*	-1.574

Anorexic and IvF-patients do not show a dissociation of body parts associated with obesity from the real body according to Hartmann's zone of indifference (-1.518 in anorexics vs. -0.525 in IvF-patients) (see Table 5).

Table 5: Differences between anorexics and IvF-patients for the average distances real body/body parts associated with obesity

	Distances real body/body parts associated with obesity	
	Anorexic	IvF
	N	32
Average distances	-1.518	-0.525

Discussion

Our study developed an approach to assess some parameters that can be derived from the Body Grid. In individual diagnostics, and also in group statistics, Body Grid and Body Identity Plot lead to a variety of new perspectives in identifying disorders in body image of different patient groups. It is in this way possible to purposively test hypotheses on dissociation tendencies involved in representations of body parts as well as to identify dissociations tendencies of real and ideal body, e.g. less body acceptance.

We found significant differences in the body image of anorexics and IvF-patients: By contrast to IvF-patients the anorexics show a split of real and ideal body repeatedly described in the literature and which could be interpreted as a negative body acceptance and an idealization of the ideal body.

Furthermore, anorexics show a dissociation of body parts linked with obesity from the ideal body which emphasizes the idealisation of the ideal body. We interpret these findings as a strong rejection of body parts which stand for obesity and physical desires. For the anorexic these body parts constitute a threat to their body-related ideal of a completely controlled thin body. The dissociation of genital organs also found here by anorexics could be understood in this sense of a specific body-experience profile that has been repeatedly described in the clinical literature [2], [19], [13] and is easily comprehensible as regards the basic underlying disorder. The psychic defence of anorexics is directed against the sexual body, the instinctual and desiring aspect of the body, and thus against the genital organs and sexual functions. The dissociation of body parts associated with obesity and sexuality from the ideal body and the dissociation of real and ideal body which we have found pointed the loose mental representation of body image in anorexics [32]. By dissociating body parts which are associated with negative aspects of the self like the genital organs or so-called "problematic body parts" the anorexic patients try to stable their low self-esteem by maintaining an unrealistic and idealized body ideal.

The group of infertile patients show also a tendency of dissociation of body parts - i.e. genital organs - from the

ideal body but this tendency of dissociation is much more focused. In IvF-patients the dissociation is limited to genital organs whereas the dissociation tendencies of anorexics comprise much more body parts - the so-called problematic body parts. Moreover, the split of real and ideal body in anorexics indicated a deep body image disturbance and the negative body acceptance.

Contrary to the body image disturbance of anorexics the tendency of dissociation of the genital organs observed by infertile patients could be interpreted as the result of loss of the narcissistic balance caused by infertility. It could be assumed that for coping with destabilisation of the self in the course of infertility the infertile women dissociate their insufficient associated genital organs. Deneke & Hilgenstock ([8], p. 31) explicitly described the dissociation of body parts as a mode of self-regulation in which "the experience of a lack of self-esteem threatening the person as a whole is restricted to the body representations." Following these authors who described dissociation of body parts as a mode of regulation of the self-esteem the dissociation of genital organs by IvF-patients could be understood as a mode of coping with infertility. Dealing with infertility may be due to focus on the genital organs. As a result of this process these body parts are dissociated from the body (and the self) but this mode of dissociation does not split of the cohesive structure of the body image as a whole like we could see in body image of anorexics.

The grid approach allows to elicit the inner structure of body image and central - often preconscious - dimensions of body experience in the form of an illustrative graph and make them accessible to therapeutic focussing, a result that has rarely been achieved with the aid of conventional methods of investigation, eg. questionnaires. With the grid approach it was possible to evaluate differences in body image of different patient groups. But further research is necessary: The hypothesis that dissociation of body parts and "idealisation" of ideal body - derived from the Body Grid - are measures for body acceptance and cohesive body image has to be proved in further studies especially with subjects who do not suffer from body image disturbance or body insufficiencies.

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