CHAPTER 3

Postoperative psychological functioning of adolescent transsexuals:

A Rorschach study

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Abstract

The Rorschach Comprehensive System was used to assess postoperative psychological functioning in transsexuals who applied for sex reassignment in adolescence. We investigated a group of 22 consecutive adolescent transsexuals, who were otherwise psychologically well adapted. Nineteen subjects provided valid Rorschach protocols before and after sex reassignment. The most notable change found was an increase in X+%, reflecting a decrease in *both* distorted perception and idiosyncratic perception. Little support was found for the idea of major psychological deterioration for the patients as a group. Rather, the results suggest stability in psychological functioning over time. The Rorschach findings are consistent with questionnaire data from earlier studies, with the exception that the Rorschach data may point to some improvement in reality testing.

Introduction

Although cross-gender identity has been reported as beginning at two years of age, medical treatment for it is never considered before puberty, as most children with a cross-gender identity will not become transsexuals later in life. In a few, however, the cross-gender feelings will remain or grow stronger after puberty (Smith et al., 2001; Zucker and Bradley, 1995). In increasing numbers, these adolescents attend gender identity clinics in order to obtain sex reassignment (SR) by means of hormonal and surgical treatment. Despite the early onset of the disorder, there is great reluctance among clinicians to start the actual SR procedure (i.e., hormone treatment) before the age of 18. Because adolescence is a phase of identity development, clinicians fear that already confused adolescents, due to experimenting with certain aspects of gender, such as gender role behavior, might erroneously conclude that they are transsexual. The risks of making the wrong diagnosis and postoperative regret are often considered to be too high. A more practical reason for unwillingness to start SR before 18 is that in many countries adolescents are still legally dependent on the consent of their parents when deciding upon medical treatment. Resistance from nonconsenting parents thus forms an additional complicating factor in the treatment process, while at the same time the clinician runs an increased risk of litigation.

Naturally, if treatment modes other than SR could alter extreme and lifelong cross-gender identities, clinicians should refrain from SR. But, as we have pointed out elsewhere, the literature does not permit us to draw such conclusions (Cohen-Kettenis and Kuiper, 1984). Understandable as the dilemma of conscientious professionals who want to prevent postoperative regret may be, refusing or delaying medical treatment is not always in the best interest of the patient. Adolescents who have been extremely cross-gendered from their earliest years may, especially around puberty, develop other problems such as depression or social anxiety as a consequence of their gender identity disorder (GID). In these cases, late treatment could have a negative impact in a variety of areas that are particularly important during adolescence (e.g., peer relationships, romantic involvements, or academic achievement, or all of these). This developmental arrest may in itself lead to additional, yet avoidable problems. Second, the physical changes of puberty (e.g., a low voice and beard growth in male-to-female transsexuals [MFs]) create lifelong traces of the biological sex when treatment is unduly postponed. Indeed, Ross and Need (1989) found that postoperative psychopathology was primarily associated with factors that made it difficult

for postoperative transsexuals to pass in their new gender or that continued to remind them of their transsexualism. Thus, early treatment may be able to prevent unnecessary negative emotional and psychological consequences. Third, on the basis of numerous follow-up studies, it can be concluded that, in adults, unfavorable postoperative outcome is related to a late start of the SR procedure rather than an early one (for a review, see Cohen-Kettenis and Gooren, 1999). Age at assessment also emerged as a factor differentiating two small groups of adult MFs with and without postoperative regrets (Lindemalm et al., 1987).

Since 1987, adolescents with GID have been diagnosed and treated at the gender clinic of the Department of Child and Adolescent Psychiatry, University Medical Center Utrecht (UMCU), in collaboration with the Gender Team of the Free University Medical Center (FUMC) in Amsterdam. The clinical procedure is based on the Standards of Care of the Harry Benjamin International Gender Dysphoria Association (Levine et al., 1998), a professional organization in the field of GIDs, and is described in detail in Cohen-Kettenis and van Goozen (1997).

In a carefully selected group of applicants, the often-assumed association between transsexualism and psychopathology has not been found (Cohen et al., 1997; Cohen-Kettenis and van Goozen, 1997; Smith et al., 2001). This significantly contributed to the decision to start hormone therapy between the ages of 16 and 18 in these adolescents. This happens in two phases: first, hormones with reversible effects (for MFs, antiandrogens to block further masculinization of the body; for female-to-male transsexuals [FMs], progestins to suppress menstruation); second, estrogens to feminize the MFs and androgens to masculinize the FMs. If applicants do not fulfill the rather strict treatment eligibility criteria, treatment is denied or postponed until adulthood.

Two studies were carried out to examine the effectiveness of SR for adolescent transsexuals. Cohen-Kettenis and van Goozen (1997) conducted an ex post facto study on postoperative functioning of the first 22 consecutive adolescent transsexual patients who had attended the gender clinic at the UMCU and who had undergone SR. They concluded that starting the SR procedure before adulthood resulted in favorable postoperative functioning, provided that careful diagnosis had taken place in a specialized gender team and that the criteria for starting the procedure early had been strict. To check the reliability of the findings, a prospective study was performed involving the next 20 consecutive

adolescents who had undergone SR and 27 adolescents whose application for SR had been rejected (Smith et al., 2001). Again, the results did not confirm the concern that psychological functioning would deteriorate after SR.

In both studies, psychological functioning was measured by means of well-known reliable and valid self-report personality questionnaires. As a group, the treated adolescent transsexuals did not show signs of severe psychopathology, neither before nor after treatment. Compared with Dutch normative groups, the mean follow-up scores of the patients in both studies were all within the average range. However, some clinicians, such as Lothstein (1984), criticize the use of self-report questionnaires with transsexuals. Lothstein argued that transsexuals suffer from borderline personality pathology and stated that the intact reality testing of individuals with such a pathology is only expected to become impaired in unstructured situations. So self-report questionnaires may be too structured to uncover this phenomenon. In addition, the possibility was mentioned that transsexuals intentionally try to “fake good” on self-report measures in order to be referred for SR (before treatment) or downplay negative outcomes as a psychological defense (after treatment).

Therefore, information was gathered on the psychological functioning of adolescent transsexual applicants for SR, making use of the Rorschach test. This instrument is thought to be less subject to influences of conscious steering in responding. Part of the collected data was used in a study to determine the extent to which psychopathology is necessarily associated with adolescent transsexualism (Cohen et al., 1997). Areas of psychological functioning associated with fundamental psychological disturbances were assessed by means of the Rorschach Comprehensive System (Exner, 1995). As a group, the adolescent transsexuals did not show the marked degree of psychopathology encountered in psychiatric groups on the variables investigated. The results supported the findings among adult transsexuals that major psychopathology is not associated with the development of transsexualism (Cole et al., 1997; Fleming et al., 1982; Mate-Kole et al., 1988; Pauly, 1981).

The aim of the present follow-up study is to examine the level of psychological functioning of adolescent transsexuals before and after SR treatment. Specifically, we aim to detect potential differences in psychological functioning, which might not become apparent with structured questionnaires. Therefore, a less structured instrument is employed: the Rorschach, following the procedure of the Comprehensive System (Exner, 1995). A design

involving random assignment to early versus late treatment or SR treatment versus non-SR treatment would be methodologically preferable over a design without a control group. However, as is repeatedly pointed out in follow-up studies among transsexuals, it is for ethical reasons not possible to create a late or nontreated control group. Moreover, chances are low that patients, after being informed about its purpose, would agree to participate in such a study.

Method

Subjects

Twenty-two patients who had participated in the Cohen et al. (1997) study and had received SR surgery were requested to participate in a follow-up study making use of the Rorschach test (about half of these patients had participated in the first questionnaire follow-up study and the remaining patients had participated in the second). Two patients refused participation. As one patient did not provide a protocol with 14 or more responses, valid re-test protocols were available for 19 patients.

The mean age of the 19 patients was 22.5 years (SD = 2.1, range, 18-27) at follow-up. Six patients were MFs and 13 were FMs. MFs and FMs did not differ significantly in terms of age.

Procedure

The Rorschach was administered to patients in accordance with the procedures for the Comprehensive System (Exner, 1995). Psychologists trained in the Comprehensive System administered the Rorschach protocols. These psychologists were not the clinicians who referred patients for hormone treatment.

Testing prior to SR was carried out as part of the standard procedure at the Department of Child and Adolescent Psychiatry at UMCU. Testing following SR was performed at FUMC in Amsterdam, where hormone treatment and surgery takes place.

The mean period of length between the pre-SR and post-SR testing sessions was 58.5 months (SD = 14.5, range, 40.5-87.2). Length of time between the two testing sessions was not significantly associated with gender, with age at time of first testing, nor with age at time of second testing.

The Ethics Committees of both the UMCU and the FUMC approved the study.

Statistical analyses

Univariate two-tailed paired *t* tests were used to determine if there were changes between pre- and posttreatment psychological functioning of the adolescent transsexuals. An independent second psychologist coded the post-SR protocols.

Results

Summary statistics for 69 Rorschach Comprehensive System variables were studied for differences between pre-SR and post-SR measurements. This was done for the full group of patients and for MFs and FMs separately (see Table 1).

Table 1: Pre-SR (n = 19) and post-SR (n = 19) means and t values for Rorschach variables

		Means			Paired	Two-tailed
Cluster	**Variable**	**Pre**	**Post**	**Difference**	***t* (18)**	***p***
Reliability						
	R	24.2	21.9	-2.3	0.97	
Control						
	EB					
	M	4.5	4.0	-0.5	0.92	
	WsumC	2.2	1.2	-1.0	2.60	.02
	EA	6.7	5.2	-1.5	2.45	.02
	eb					
	FM+m	3.9	3.6	-0.4	0.75	
	SumSh	3.5	3.0	-0.5	0.92	
	es	7.5	6.6	0.9	1.03	
	D-Score	-0.4	-0.4	0.0	0.00	
	Adj es	6.1	5.8	-0.5	0.72	
	Adj D	0.0	-0.2	-0.2	0.83	
	FM	2.6	2.8	0.2	0.51	
	m	1.3	0.7	-0.6	2.58	.02
	C’	1.4	0.6	-0.8	2.54	.02
	V	0.5	1.0	0.5	2.38	.03
	T	0.3	0.4	0.1	0.52	
	Y	1.4	1.1	-0.4	1.28	
Ideation						
	a:p					
	a	4.3	3.8	-0.5	0.80	
	p	4.3	3.7	-0.6	1.55	
	Ma:Mp					
	Ma	2.5	1.8	-0.7	1.41	
	Mp	2.2	2.2	0.1	0.12	
	Int.Ind.	1.3	1.7	0.4	1.00	
	M-	1.0	0.5	-0.5	1.69	
	Sum6	4.3	2.8	-1.5	1.37	
	Level-2	0.3	0.2	-0.1	0.37	
	WSum6	8.8	4.5	-4.4	1.75	.10
	Mnone	0.1	0.0	-0.1	1.00	

Cluster	Variable	Means Pre	Means Post	Means Difference	Paired $t(18)$	Two-tailed p
Mediation						
	P	6.0	5.7	-0.4	0.88	
	X+%	0.50	0.62	0.12	3.24	.005
	F+%	0.55	0.59	0.04	0.63	
	X-%	0.23	0.18	-0.06	1.77	.09
	S-%	0.25	0.22	-0.03	0.47	
	Xu%	0.25	0.19	-0.07	2.06	.05
Processing						
	Lambda	1.43	1.39	-0.04	0.18	
	Zf	12.8	10.9	-1.9	2.77	.01
	Zd	-0.1	-1.2	-1.1	1.09	
	DQ+	6.1	4.9	-1.2	1.54	
	Dqv	0.7	0.8	0.1	0.44	
	W	9.5	7.9	-1.5	2.38	.03
	D	11.3	10.4	-0.8	0.42	
	Dd	3.5	3.5	0.1	0.07	
Affect						
	FC:CF+C					
	FC	1.3	0.5	-0.8	3.17	.005
	CF+C	1.3	0.8	-0.4	1.29	
	Pure C	0.4	0.2	-0.2	1.17	
	Afr	0.56	0.59	0.0	0.43	
	S	3.4	3.0	-0.4	0.61	
	Blends	3.6	2.2	-1.4	2.52	.02
	CP	0.1	0.1	0.0	0.00	
Interpersonal						
	COP	1.5	1.1	-0.4	1.38	
	AG	0.7	0.4	-0.3	1.68	
	Food	0.3	0.2	-0.1	0.37	
	Isolate	0.21	0.17	-0.04	1.73	.10
	Pure H	3.4	2.3	-1.2	2.36	.03
	Other H	3.7	3.6	-0.1	0.23	
	(H)+(Hd)	2.0	2.3	-0.3	0.66	
	(A)+(Ad)	0.6	0.9	0.3	1.55	
Self-perception						
	Ego	0.44	0.41	0.03	0.57	
	Fr+rF	0.7	0.5	-0.2	0.83	
	FD	1.6	0.7	-0.9	2.69	.02
	An+Xy	0.4	0.8	0.4	1.91	.07
	MOR	1.3	0.7	-0.6	1.68	
Indices						
	L > 0.99	11	13	+2	0.81	
	X-% > 0.15	15	10	-5	1.76	.10
	Ego < 0.33	3	8	+5	2.04	.06
	Ego > 0.44	9	7	-2	0.70	
	SCZI > 3	3	0	-3	1.84	.08
	DEPI > 4	4	6	+2	0.81	
	CDI > 3	5	10	+5	2.04	.06
	S-Con > 7	0	0	0		
	HVI+	6	5	-1	0.33	

Note: Only two-tailed p values ≤ .10 have been listed. Mean values have been rounded off.
Intercoder agreement Kappas: 0.63 for Color Codes, 0.74 for FM, 0.48 for m, 0.81 for V, 0.78 for Conventional Form Quality (X+%), and 0.85 for Organizational Activity (Zf).

Differences between pre- and post-SR measurements with an associated univariate two-tailed at $p \leq .05$ were found for 13 variables. The univariate p of two of these variables was less than .01: form quality (X+%) was greater after SR than before and the frequency of form dominated color responses (FC) was less after SR than before.

For a description and interpretation of the significant variables, and of X-% (one of the main variables indicating distorted perception), following Exner's guidelines (Exner, 1995) for interpretation, see Appendix. For a more comprehensive description of all the variables and of the blots, see Exner (1995).

Discussion

We observed that there were significant differences for a little less than one fifth of the Rorschach variables between the pre-SR and post-SR measurements. The differences were not systematic in the sense that they were all in one direction or even within one domain of functioning. We found, for example, a decrease in frequency for a number of determinants (m, C', FC and FD) but a significant increase in another (V). The changes were within normal ranges for a number of variables. Thus, it is difficult to find a coherent interpretation for these differences.

There was a sharp increase in X+%. This can be seen as reflecting a greater amount of conventionality in processing. The increased X+% is attributable to a decrease in *both* distorted perception (X-%) and idiosyncratic perception (Xu%). In our earlier study of pre-SR adolescent transsexuals (Cohen et al., 1997), we found the adolescent transsexuals to have an X-% intermediate between a psychiatric adolescent and a student control group. In that study, it was the only finding consistent with the idea that adolescent transsexuals exhibit an underlying psychopathological disturbance. Therefore, it is interesting to note that as a group the patients in this study showed improvements and obtained X-% values nearly equal to those of the student controls in the earlier study. It may be that after SR there is a diminution in psychological conflict, resulting in less impingement on conventionality. Prior to SR, transsexuals experience a serious psychological discrepancy between their physical self and their feeling of a *real* self. Sex reassignment is sought as a means of resolving this discrepancy. If SR is successful, the discrepancy can be eliminated or reduced, lowering the possible strain and debilitating effect of the discrepancy on reality testing.

We found little or no support for the idea that there was major psychological deterioration for the patients as a group. By and large, the results suggest stability in psychological functioning over time and that there were some areas in which improvement was evident.

A number of limitations of the study need to be addressed. One limitation is formed by the size of the sample. For statistical purposes, the total number of subjects was small. However, the sample is based on a sizeable proportion of the total population of adolescent transsexuals requesting SR in the Netherlands and, until larger samples are available, we must make best use of the modest data available to us.

A second limitation concerns the possibility of selection bias in our sample. Firstly, adolescents who apply for SR have parents who are generally supportive of treatment (though they may be unhappy about their child's transsexualism). The adolescents in our sample may enjoy more favorable circumstances than adolescent transsexuals whose parents are not supportive of treatment. Secondly, adolescents with less extreme or more fluctuating cross-gender identities are more likely not to pursue SR this early in life. In any event, we do not have data on the number of adolescent transsexuals not applying for SR. We can therefore not claim that our patients are representative of all Dutch adolescent transsexuals. Our conclusions pertain to the population of psychologically well-functioning adolescent transsexuals that applies for SR before adulthood and completes SR in adulthood. (One of the selection criteria for early SR is psychological stability.)

A third limitation concerns experimenter bias due to the possibility that the psychologists administering and scoring the Rorschach were not blind to the potential problems of the individuals tested or perhaps even the study hypotheses. Care was taken to avoid additional bias in the coding process by having independent psychologists, who were not familiar with the patients or their condition, carry out a second coding procedure of the post-SR protocols.

A fourth limitation is the absence of a treatment control group. Ideally, a different research design in which eligible SR applicants would be randomly assigned to either a treatment group or a nontreatment control group would have been methodologically more desirable. As we pointed out earlier, such a study is for ethical and practical reasons impossible to conduct.

In their questionnaire study, Cohen-Kettenis and van Goozen (1997) found a few differences between pre- and post-SR adolescent transsexuals. On the short version of the MMPI (NVM) (Luteyn et al., 1980) and the Dutch Personality Inventory (NPV) (Luteyn et al., 1985), an increase was observed in the Extroversion, Dominance, and Self-esteem subscales and a decrease in the Inadequacy subscale. Pre- and post-SR mean scores were all within average ranges of Dutch norms. This result was confirmed in the second questionnaire study (Smith et al., 2001). Our Rorschach findings are therefore consistent with the questionnaire investigations with regard to the stability of psychological functioning throughout the SR treatment period, with the exception that the Rorschach data may point to some improvement in perceptual accuracy, indicating enhanced reality testing. The fear that the adolescents' psychological functioning will deteriorate as a consequence of an early start of the SR procedure is not substantiated by the Rorschach findings. If anything, their functioning changes in a more healthy direction.

Many applicants for SR are not good candidates for SR and probably will never be. In some, SR is sought as a solution for nongender problems. Careful diagnostic procedures are used to keep "questionable" SR applicants from receiving SR. When adverse factors are present in the psychological profile of an adolescent applicant, it is probably prudent to maintain a conservative policy of delaying the start of hormone treatment until adulthood.

Appendix

Description and interpretation of the significant variables

WsumC: the weighted sum of all color responses (each FC [Form Color] = 0.5; each CF [Color Form] = 1.0; each C [Color] = 1.5). This index variable is seen as an indication of the amount of emotional energy that is used when the subject responds to the environment.

EA: experienced actual (the sum of M and WsumC) is regarded as an indication of the resources available to the individual in guiding behavior. (M: human movement responses are coded for responses involving the kinesthetic activity of a human, or of an animal or fictitional character in human-like activity.)

m: inanimate movement responses refer to the amount of the currently experienced anxiety as expressed in thoughts that are not in the subject's center of attention.

C': achromatic color responses are responses in which the percept is referred to as being either black, white or gray. The amount of C' in the protocol is seen as an indication of the amount of suppression of emotion.

V: vista responses are coded for responses in which there is a perception of three dimensionality based on shading characteristics of the blot. The presence of vista responses is considered to suggest the presence of painful experience in the perception of self.

X+%: the percentage of responses that are conventional (and adequate). A response is considered conventional when it is offered to a particular area of the blot by at least 2% of the population.

X-%: the percentage of responses showing poor correspondence between the verbalized percept and the contours of the blot. The presence of more than a few of such responses is considered as distorted perception.

Xu%: the percentage of unusual responses (form adequate but not conventional). These are responses, which are immediately recognized as adequate, but relatively rarely offered in the population.

Zf: the frequency of responses exhibiting organizational activity. This frequency provides important information concerning the extent to which the subject has organized the stimulus field and whether that effort has been efficient. This frequency is regarded as an indication of the amount of cognitive effort exercised to organize the environment.

W: whole responses are a specific form of organizational activity and are regarded as the number of responses involving the entire blot.

FC: form color responses are form-dominated responses in which color is integrated.

Blends responses are those having more than one determinant (e.g.,: color *and* movement). The number of Blends responses in a protocol is seen as an indication of emotional complexity.

Pure H is coded for responses involving full human percepts (seeing a total person as opposed to for example only a head or a hand). Presence of Pure H responses is regarded as, among other things, interpersonal maturity.

FD: form dimension is coded for responses involving three-dimensionality *not* based on shading in the blot. The presence of FD responses is considered as the use of introspection.

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