Gender Identity Disorder in Young Boys: A Parent- and Peer-Based Treatment Protocol

HEINO F. L. MEYER-BAHLBURG
Columbia University, USA

ABSTRACT

Gender identity disorder (GID) as a psychiatric category is currently under debate. Because of the psychosocial consequences of childhood GID and the fact that childhood GID, in most cases, appears to have faded by the time of puberty, we think that a cost-effective treatment approach that speeds up the fading process would be beneficial. Our treatment approach is informed by the known psychosocial factors and mechanisms that contribute to gender identity development in general, and focuses on the interaction of the child with the parents and with the same-gender peer group. To minimize the child's stigmatization, only the parents come to treatment sessions. A review of a consecutive series of 11 families of young boys with GID so treated shows a high rate of success with a relatively low number of sessions. We conclude that this treatment approach holds considerable promise as a cost-effective procedure for families in which both parents are present.

KEYWORDS

assessment, childhood, gender identity disorder, peer relations, risk factors, therapy

---

HEINO F.L. MEYER-BAHLBURG is Professor of Clinical Psychology in the Department of Psychiatry of Columbia University, a Research Scientist in the New York State Psychiatric Institute and a Full Professional Psychologist in Psychiatry Service of the New York Presbyterian Hospital. His research interests are psychosexual differentiation or the biopsychosocial development of gender and sexuality and their variants, and sexuality and HIV/AIDS. Ongoing projects and publications focus on the long-term developmental outcomes of children, adolescents and adults with various syndromes of intersexuality and their implications for clinical management as well as in the development of sexual behavior in childhood and early adolescence and the implications for the prevention of STI, including HIV/AIDS.

CONTACT: Heino F. L. Meyer-Bahlburg, New York State Psychiatric Institute and Department of Psychiatry, College of Physicians and Surgeons of Columbia University, Unit 15, 1051 Riverside Drive, New York, NY 10032-2695, USA. [E-mail: meyerb@child.cpmc.columbia.edu].

Clinical Child Psychology and Psychiatry 1359–1045 (200207)7:3 Vol. 7(3): 360–376; 024034

Gender identity disorder in childhood

GENDER IDENTITY DISORDER (GID) – according to DSM-IV (American Psychiatric Association [APA], 1994) a combination of a 'strong and persistent cross-gender identification' with 'persistent discomfort about one's assigned sex or a sense of inappropriateness in the gender role of that gender' – is an uncommon psychiatric condition. Systematic epidemiologic prevalence data are not yet available. Childhood GID occurs several times more frequently in boys than in girls, if judged by referral patterns to specialized clinics. As far fewer data are available on girls with GID, and hardly any on their treatment, this article is limited to boys. Co-morbidity with other psychiatric conditions, especially conditions with an internalizing character, have been reported (e.g. Coates & Person, 1985; Zucker, 1990; Zucker & Bradley, 1995). Such co-morbidity seems to be particularly characteristic of boys referred for the evaluation of a gender identity problem during middle childhood (Zucker, 1990; Zucker & Bradley, 1995).

In only a very small subgroup of such boys, will the GID continue into adolescence and adulthood (transsexualism). By adolescence, the cross-gender identity of *most* appears to have faded, although the process or the causes of such fading have not been systematically studied. The majority of boys with GID will apparently become homosexual, and a minority heterosexual (Green, 1987). The prognosis for girls with GID is not well known, but retrospective data indicate that a few of them also will become transsexual, and others homosexual.

Justification of treatment

In the transgender rights movement, the question of a clinical diagnosis of GID is currently under intense debate. Many transgender persons would like to avoid the stigma of 'mental disorder' and prefer a medical – for instance, neurological – diagnostic category. Such a designation would permit the provision of needed health services. However, this argument predominantly addresses GID in adulthood. In regard to childhood GID, many gay/lesbian activists interpret its statistical association with later homosexuality as an indication that childhood GID is really childhood homosexuality ('proto-gay', Corbett, 1998) and should not be labeled as pathology at all (e.g. Minter, 1999). The exchanges between Richardson (1996, 1999) and Zucker (1999a), and Isay (1997) and Zucker (1999b) present the major arguments. Similarly to Zucker, we see GI and its variants as conceptually different from sexual orientation. A subgroup of children who later develop a homosexual orientation may have an increased vulnerability for developing childhood GID, but that does not make GID synonymous with homosexuality, especially given the fact that the GID has typically vanished by puberty.

What is apparent if one works clinically with GID boys is that they often experience problems such as frequent and severe ostracism by peers and others, including family members. They may show depressive and anxious features, already in early and middle childhood, and develop suicidal ideation when older. Because of continuing peer pressure, if they still act noticeably feminine in early and mid-adolescence, they run the risk of dropping out from school and jeopardizing their education. Thus, childhood GID in boys certainly constitutes a risk factor for exposure to social pressures and adverse emotional consequences. These sequelae of GID are our primary reason for its treatment. We expect that we can diminish these problems if we are able to speed up the fading of the cross-gender identity which will typically happen in any case. At present, we do not know for certain whether childhood GID that fades by puberty and childhood

GID that continues into adulthood are two different childhood conditions. Therefore, we cannot rule out the possibility that early successful treatment of childhood GID will diminish the risk of a continuation of GID into adulthood. If so, successful treatment would also reduce the need for the long and difficult process of sex reassignment which includes hormonal and surgical procedures with substantial medical risks and complications.

Note that the prevention of homosexual development is not a goal of this treatment approach. Homosexuality per se is not a psychiatric disorder and therefore not in need of treatment. In addition, the available follow-up data on boys with a history of therapy for GID (Green, 1987) do not provide us with evidence suggesting that a treatment program focused on GID in childhood will have any effect on the development of sexual orientation.

Existing treatment approaches

To date, no well-established standard treatment regimen for the reduction of childhood GID is available, either pharmacological or psychological (Zucker, 2001). The treatment literature is typically limited to case reports, and descriptions of treatment regimens mostly refer to two categories (Zucker, 2001; Zucker & Bradley, 1995): (i) psychodynamically oriented or psychoanalytic treatment (e.g., Coates, Friedman, & Wolfe, 1991; Di Ceglie, 1998; Meyer & Dupkin, 1985), (ii) behavior therapy (Rekers, 1977, 1985; Rekers, Kilgus, & Rosen, 1990). However, the latter's coercive flavor, especially when associated with a religious ideology, has been strongly criticized (Pleak, 1999). Many therapists do not adhere to one specific school, but use elements of these and other therapeutic approaches.

Successful outcome has been reported for both forms of therapy in diverse individual cases. Yet, the lack of systematically controlled treatment studies of larger samples of boys with GID makes any statement on the general efficiency of a specific treatment approach impossible. The case reports involving dynamic treatment approaches have the added disadvantage that they leave very unclear which of the many therapeutic activities and techniques employed over the years of treatment actually account for symptomatic change, or even whether the multi-year treatment adds anything at all to the long-term process of fading of the cross-gender identity.

Importantly, the two predominant treatment modes described in the literature require much time and effort and are, therefore, very expensive. The case reports of psychodynamic treatment typically include multiple sessions per week over long periods, often spanning several years. The behavioral approach advocated by Rekers includes many home visits, sometimes with several graduate students involved in one case, an arrangement that is difficult to transpose into routine clinical practice.

Thus, there is a need for an effective treatment program that is relatively short-term and accessible to families of a wide socio-economic range. The purpose of the current article is to present a treatment protocol developed in our unit and to document the treatment outcome in a consecutive series of 11 young boys so treated.

Rationale for a new treatment approach

How should one go about developing a treatment program for children with GID? One would expect that some guidance should be provided by what we know about factors that contribute to the development of GID and/or its maintenance. Unfortunately, our knowledge here is still rudimentary. Table 1 lists a number of factors that have been suspected or demonstrated to play a role (Blanchard, Zucker, Bradley, & Hume, 1995; Coates et al., 1991; Coates, Hahn-Burke, Wolfe, Shindledecker, & Nierenberg, 1994;

Table 1. Putative Gender Risk Factors

Abnormalities of the prenatal sex hormone milieu
Abnormalities of sex hormone production or utilization
Exposure to exogenous sex hormones (e.g., progestogens, DES)
Exposure to drugs (e.g., barbiturates, opiates)
Maternal stress (physical, emotional)
Characteristics of the boy
Feminine physical appearance
Poor health
Temperament (e.g., inhibited and shy)
Early separations
Separation anxiety
Rivalry with sister
Birth order late
Number of male siblings increased
Sensory reactivity enhanced
Sexual abuse
Characteristics of the parents or other caretakers
Parental preference for girl
Inadequate parental sex-typing
Indifference to cross-gender behavior
Initiation/encouragement of cross-gender behavior
Maternal encouragement of extreme physical closeness with boy
Lack/inadequacy of adult male models
Maternal dominance
Parental psychiatric problems

Coates, Wolfe, & Hahn-Burke, 1994; Green, 1974, 1987; Marantz & Coates, 1991; Meyer-Bahlburg, 1993; Zucker, 1985, 1990; Zucker, Wild, Bradley, & Lowry, 1993). Yet the empirical evidence, where it exists at all, is usually limited to not more than one study and is correlational rather than causal in character, so that none of the factors can be considered fully established. That conclusion applies even to the recently documented neuroanatomic feature of a reduced-sized brain nucleus, the central subdivision of the bed nucleus of the stria terminalis (BSTc) in adult male-to-female transsexuals (Kruijver et al., 2000; Zhou, Hofman, Gooren, & Swaab, 1995). Their BSTc volume was comparable with that of women and had approximately half the volume found in heterosexual and homosexual men. Replication by independent laboratories is yet to be done, and we also do not know whether such findings in adults apply to childhood GID.

Note that none of the suspected pregnancy factors – all of which imply variations of the prenatal sex-hormone milieu – has definitively been shown to operate in boys with GID. Even if there were solid empirical evidence, it would not necessarily yield any specific and feasible treatment approach, because organizational effects of prenatal hormones on brain development are likely to be limited to specific periods of fetal ontogenesis. There is good reason to assume that gender problems as they occur in children born with ambiguous genitalia are not the same as those in GID (Meyer-Bahlburg, 1994). The fact that, in our clinic, children who fully meet DSM-IV criteria for GID typically display much more extreme cross-gender behavior (5–10 standard deviations apart from gender-typical behavior on global bipolar gender scales) than intersex children with known prenatal hormone abnormalities (Meyer-Bahlburg, unpublished data) also makes a primary role of prenatal hormones in the development of GID less likely. In

addition, there is no evidence for any sex-hormone abnormalities in boys with GID during early or middle childhood. Thus, treatment with sex hormones – a question frequently brought up by parents – is not an option. However, many boys with GID, even after the gender identity problem is resolved, appear to show a 'temperamental syndrome' that includes low interest in rough-and-tumble play and sports, low aggressiveness with other boys, aesthetic sensibility, and high emotionality (Meyer-Bahlburg, 1999), supported by small-sample studies showing increased prevalence of separation anxiety and depressive features (Coates & Person, 1985) and of inhibited-child syndrome and increased sensory sensibility (Coates & Wolfe, 1995). If such a temperamental syndrome should be confirmed, it is likely to have a partly genetic basis, as shown for instance for the inhibited child syndrome, and the genetic basis may well be unrelated to prenatal sex hormone variations.

Additional presumed etiologic factors for childhood GID are on the psychosocial side. They frequently imply or are derived from known mechanisms of social learning that appear to operate in the establishment or maintenance of gender-role behavior in children without GID (Fagot, 1985; Fagot & Leinbach, 1989; Huston, 1983) and are also reflected in the usually (but not always) quite strong influence of older siblings on the development of gender-role behavior in younger children in general (McHale, Crouter, & Tucker, 1999; Rust, Golombok, Hines, & Johnston, 2000). That social-learning mechanisms are involved is also compatible with success of intensive behavior therapy shown in the case reports by Rekers and co-workers (Rekers et al., 1990). In addition, increased insecure attachment has been noted in boys with GID (Birkenfeld-Adams, quoted in Bradley & Zucker, 1997) which may implicate aspects of the parent–child relationship in the development of the gender problem.

Thus overall, in the context of contemporary developmental psychopathology (Johnson, Cohen, Kasen, Smailes, & Brook, in press; Sameroff, 1997; Zeanah, Boris, & Larrieu, 1997), the most likely developmental pathway to GID will involve temperamental features coupled with a variety of psychosocial risk factors which in aggregate determine how far the child moves into the cross-gender area. Psychosocial risk factors are more likely targets of psychosocial interventions than temperament.

From birth onward, the child is exposed to psychosocial influences of the family, especially parents and siblings. Often one sees an unusually strong attachment of the GID boy to one or more adolescent or adult women, whereas fathers may be little available or even avoid the child because they dislike the feminine behavior. Participation in or even encouragement of feminine play and demeanor, or discouragement of rough and tumble boyish activities by a parent, often the mother or another woman in the family, are quite frequent.

Additional psychosocial influences on gender development come from the peer group (Maccoby, 1998). Relations to the peer group are a crucial part of the GID diagnosis. For instance, the key symptoms described for young boys with GID include 'strong preference for playmates of the other sex', i.e. of girls, along with 'intense desire to participate in the stereotypical games and pastimes of the other sex', preferential adoption of cross-gender pretend play, and cross-dressing. Fear and avoidance of other boys can be striking. Fridell (2001) has documented in detail the difficulties boys with GID experience in relations to other boys. A likely consequence of their preference for girl playmates is the continuous rehearsal of female role skills and habits, and a lack of development of male role skills and habits. The avoidance of contact with boys also implies a lack of peer group reinforcement for male-typical behavior; such peer-group reinforcement has been documented from middle preschool age on (Fagot, 1985; Katz & Walsh, 1991; Maccoby & Jacklin, 1987). From the large body of evidence on childhood

peer relations in general (Schneider, 2000), we can infer that poor relations to male peers also indicate poor social competence, at least with male peers, and an increased likelihood of peer victimization (Hawker & Boulton, 2000) and of various internalizing problems (Boivin, Hymel, & Bukowski, 1995). We have to take into consideration that a boy's peer cohort is the age group he will have to interact and compete with in all spheres of adolescent and adult life, so that significant problems in this area during childhood may constitute an important disadvantage later.

The treatment literature contains some other useful hints for treatment development. For instance, Zucker, Bradley, Doering, and Lozinski (1985), in a survey of treatment cases covering diverse treatment approaches, concluded that the 'degree of [gender-related] behavioral change at follow-up correlated positively with number of therapy sessions and the child therapists' emphasis on gender-identity issues'. We have to keep in mind, however, that even 3–4 weekly sessions with a psychodynamically oriented therapist represent a small amount of time in comparison with the multiple social influences operating at home and in school. In addition, there are the questions of stimulus and response specificity. An experimental study by Rekers (1975) clearly demonstrated that behavior therapy of gender-atypical behavior in boys with GID in a therapist's office generalizes poorly to the home environment, and Rekers has repeatedly demonstrated that behavior therapy directed at one specific gender-atypical behavior may not necessarily generalize to another (possibly because classical behavior modification neglects the mechanism of self-socialization originally described by Kohlberg, 1966).

Taken together, these diverse considerations led us to develop a treatment approach for young children with GID that is mediated by the parents and includes a strong emphasis on relationships with same-sex peers. The expectation is that markedly increased exposure to same-sex peers will lead to more typical sex-differentiated behavior, as it has been shown by Martin and Fabes (2001) in a longitudinal study of a convenience sample of 3–6-year-old children (presumably without GID). Our particular treatment program has been designed for the age group we see the most, 4–6-year-olds.

Assessment

Our involvement with the patient begins with a systematic evaluation which by itself influences already the parents' understanding of the situation. The evaluation protocol has been designed to establish if the child meets criteria for the DSM diagnosis of GID and to rule out somatic intersexuality, to assess the degree or severity of GID, to identify other behavioral problems that need attention, to screen for putative risk factors that may have facilitated the development of GID in this child, and to identify factors that are contributing to its maintenance or might constitute barriers to change. The evaluation involves at least five sessions: two sessions with the parents, two sessions with the child, and a wrap-up session with the parents. Where both parents live together, we require both to participate in all sessions except those with the child.

The *evaluation procedures with the parents* include a battery of questionnaires and interviews (Table 2). Prior to Session 1, preferably right before it, in a room in the clinic, the parents complete the set of questionnaires which cover general symptoms of psychopathology and gender-specific issues. The Child Behavior Checklist (CBCL; Achenbach, 1991) is a broad-band behavioral symptom questionnaire which yields a number of factor analytically derived symptom scales and several more global scales. The Child Game Participation Questionnaire (CGPQ) was originally developed by Bates and Bentler (1973) for the discrimination of gender-typical and gender-atypical boys. It was modified (Sandberg & Meyer-Bahlburg, 1994) and re-analyzed on new samples of both boys and girls. The new scales and quasi-norms now available permit the characterization of a

Table 2. Assessment – Parents (2–3 sessions)

Written Questionnaires	
CBCL	Child Behavior Check List*
CGPQ	Child Game Participation Questionnaire*
CBAQ	Child Behavior and Attitude Questionnaire*
GRS	Gender Risk Scale
QCSB	Questionnaire for Childhood Sexual Behavior
Interviews	
General clinical interview [unstructured]	
M-GRAS-C	Gender-Role Assessment Schedule – Child, Mother Version
Diary	
Symptom diary as homework assignment (min. 2 weeks)	

*Completed by father and mother independently.

child's gender-role behavior with regard to both boys and girls his/her age (Meyer-Bahlburg, Sandberg, Dolezal, & Yager, 1994). The Child Behavior and Attitude Questionnaire (CBAQ) was originally developed by Bates, Bentler, and Thompson (1973) also for the discrimination of gender-typical and -atypical boys. The male form was modified and a new female form created (Sandberg, Meyer-Bahlburg, Ehrhardt, & Yager, 1993), and both re-analyzed on new samples, again permitting the comparison of a child's gender-role behavior with that of both boys and girls (Meyer-Bahlburg, Sandberg, Yager, Dolezal, & Ehrhardt, 1994). The Gender Risk Scale (GRS; Meyer-Bahlburg, 1984) is an un-normed checklist designed as a quick screen for many of the factors that have been hypothesized to be involved in the development of gender identity disorder (Table 1). The Questionnaire for Childhood Sexual Behavior (Becker & Meyer-Bahlburg, 1984) is another un-normed checklist and consists of items covering diverse sexual behaviors of childhood (collected from clinic charts) ranging from expression of sexual curiosity to sexual play to coitus. The first three questionnaires (CBCL, CGPQ, CBAQ) are completed independently by father and mother. This permits us a fast check on the degree of agreement between both regarding their child's behavior problems. Major disagreements may indicate significant discrepancies in the parents' attitude to the child which is important for treatment.

Session 1 begins with the inquiry about the referral reasons, current features of cross-gender behavior and a brief overview of its beginning and development, and ends with a clinical-developmental history aided by a review of the family's photo albums that cover the child's development. As a homework assignment the parents are given a structured diary form to complete for a minimum of two weeks. The diary is set up for each family individually to cover salient cross-gender and other problem behaviors of the child as reported by the parents on the written questionnaires and during the first evaluation session, along with time and activities spent with father, mother, brothers, sisters, other boys, other girls, and other men and women, as applicable. This diary can help answer several questions. It allows us to gauge how the parents can cooperate with such daily homework assignments in general, and what difficulties are presented by their lifestyle and work schedules. Are they able to perform the specific task of keeping such a diary which is used as an important monitoring tool during therapy, or will they need training? What cognitive or ideological difficulties do they have in discriminating gender-typical and -atypical activities, and do they need help in this area? How do the behaviors reported in the first session compare with those reported day by day? How do the parents cooperate with each other in such assignments?

Table 3. GIDC Assessment: Child (2 sessions)

[WORD	Pseudo-vocabulary test]
CGPQ	Child Game Participation Questionnaire
DAP	Draw-A-Person Test (with gender inquiry)
PO-1	Play Observation 1. standard toy set
PO-2	Play Observation 2. standard dress-up set
GI-I-C	Gender Identity Interview for Children
GRAS-C	Gender-Role Assessment Schedule – Child
Physical exam	
Intersex status	
Pubertal status	
General health	

The second session with the parents begins with a brief review of the preceding week's diary, but is mostly devoted to the 'Mother' version of the Gender Role Assessment Schedule-Child (M-GRAS-C; Meyer-Bahlburg & Ehrhardt, 1988b; see also Cosentino, Meyer-Bahlburg, Alpert, & Gaines, 1993), a systematic and detailed semi-structured interview held with both parents that covers in detail many aspects of the child's gender-related behaviors, interests, affiliations, etc. This may be followed, as needed, by further clinical inquiry including a brief family history.

The *evaluation procedures with the child* – usually involving two sessions – include both structured and unstructured activities (Table 3). The first session begins with the observation of how the boy is able to separate from the parent(s) who bring(s) him in.

The session takes place in an office which in one corner displays a set of male-typical and female-typical toys. The first structured activity is a simple word list presented as a vocabulary 'test' in order to provide the child and his parents with an easily acceptable label for what he did at this visit. Children who are mature enough are then orally administered the CGPQ. It is followed by a GID-specific Draw-a-Person test with inquiry. Then we schedule a 'break' during which the clinician ostensibly completes some paper work while unobtrusively observing the boy for 15–20 minutes and recording his toy and activity choices and related behaviors after he has been instructed to play for a while by himself in the toy corner. Later the clinician administers selected sections of the child version of the GRAS-C (Meyer-Bahlburg & Ehrhardt, 1998a), after the child has been given a set of Lego blocks and encouraged to construct with it whatever he likes. Dependent on when the child appears comfortable enough during session 1 or 2, the clinician administers the Gender Identity Interview (Zucker et al., 1993), a semi-structured interview designed to elicit disclosure of cross-gender wishes and ambivalences.

For the second session with the child, the toy set has been replaced by a dress-up set with stereotypically male (black cape, face mask, sword) and female (high-heeled shoes, hat, boa) role-play outfits. The inquiry focuses on the remaining sections of the GRAS-C, while the boy is again given Lego to play with. The interview is interspersed with an unobtrusively observed pretend-play session in the dress-up corner, with arts and crafts activities done at a table, and possibly some ball play.

In addition to the sessions, parents are asked to have their family physician complete a general *physical examination* report complemented by a form covering potential physical symptoms of somatic intersexuality and of (precocious) pubertal development.

Session 5 (or 6, if we need more time for the evaluation), the *wrap-up*, is again limited to the parents. This session covers the rationale for our evaluation procedures, a review of our findings, the resulting psychiatric diagnoses and other significant problems, the

prognosis of the GID and of other problem behaviors as appropriate, whether and why we recommend treatment, and what the treatment of GID and of other problems would require in terms of efforts, time and costs. The issue of homosexuality is of major concern to most parents who bring a child with a gender problem. We therefore make a special point of addressing the available prognostic data and emphasize that homosexuality is not a psychiatric disorder, that it is not the prevention of homosexuality, but the prevention of the psychosocial sequelae of GID that is the goal of treatment, and that no therapeutic approach to childhood GID is known to interfere with the development of homosexuality. As there is currently no professional consensus in regard to the status of childhood GID as a clinical entity in our society, it is very important to be open with the parents about this debate. Pleak (1999) provides useful ethical guidelines for handling this situation. At the end we let the parents decide whether they want to commit themselves to treatment now or want to think it over, and whether there are significant obstacles to treatment in the near future such as stressful periods at work or at home, travel plans, etc., which would make it desirable to postpone the onset of an intense and consistent period of treatment.

Treatment protocol

Overview On the basis of the considerations outlined in the earlier section on the rationale, we devised a protocol for the treatment of GID in boys (Table 4). The specific goals we have for the boy are to develop a positive relationship with the father (or a father figure), positive relationships with other boys, gender-typical skills and habits, to fit into the male peer group or at least into a part of it, and to feel good about being a boy. Our treatment protocol is oriented towards social learning theory and includes elements of behavior and milieu therapy, but requires the therapist to use eclectically whatever other specific techniques he or she can bring to bear on the specific gender-related and other problems a child and his family may present. The treatment sessions are conducted with the parents. If both parents live in the household, we require the consistent attendance of either at the weekly sessions. We explain to the parents that their boy's GID is not his personal problem but can be better understood as a result of the dynamic interrelationship of all members of the family unit and its interaction with the boy's temperament. Sometimes other significant caretakers are also asked to attend the wrap-up session. The boy himself is not included, because of the inefficiency of office treatment at this age and in order to minimize stigmatization that may be associated with visits to a mental-health facility, especially when gender and sex issues are discussed. During the initial intense period of treatment involving weekly sessions, the parents are asked to maintain the structured diary, with modifications as needed.

At the weekly visits, the diary serves as the basis for the weekly review of the child's

Table 4. Treatment – Overview

Goals for boy:	developing positive relationship with father (figure) developing positive relationships with male peers developing gender-typical skills and habits fitting into the male peer group feeling good about being a boy
Orientation:	eclectic – behavioral, milieu, etc.
Mode:	sessions with parents, caretakers (phone contact with school, etc.)
Monitoring:	by parental diary

behavior problems, the parental responses to the problems, and the social changes introduced by the parents. We provide guidance to the parents on how to achieve the goals described earlier, help them develop their own ways of implementing the treatment plan at home, and deal with the side effects and their underlying dynamics when the social structure within the family as well as the relations between the family and outsiders undergo change. Although the major goals and some of the techniques proposed will be suggested to all parents of boys with GID, we want the parents to come up with their own ideas and solutions as much as possible.

As the child's GID is gradually ameliorated, the frequency of the office visits by the parents is reduced. Treatment is terminated when the boy regularly seeks the presence of male friends and his cross-gender behavior appears to be largely within normal limits. Treatment may be discontinued if the progress remains unsatisfactory.

Key components

Gender ideology and sensitization Significant components of the sessions with the parents are listed in Table 5. Where appropriate, the first treatment session deals with the parents' gender ideology. For parents who are specifically opposed to sex-typing or to some male-typical behaviors such as rough-and-tumble play we need to work out an ideological compromise because, for a while at least, a moderate degree of sex-typing (at a minimum, tolerance for some degree of sex-typing demands by the peer group) is required if the GID is to resolve. (Of course, the GID itself often represents an extreme degree of sex-typing by the child himself.) Some other parents seem to have difficulties in recognizing what gender-typical behaviors in their child's age group are, and may need some initial sensitization in this area.

Father–son relationship By the time of the evaluation, family interaction and attachment patterns are usually well established. The boy with GID is often particularly close to the mother or/and another woman, such as a grandmother, teenaged sister, a nanny or a neighbor. The father may be closer to another child or may be on the fringes of family

Table 5. Behavioral/Milieu Protocol

Focus: Parents/caretakers
integrating treatment approach with parents' gender ideology;
sensitization to gender-specific behavior;
changing intrafamiliar alignments:
increased active time of father (figure) with boy,
letting go of boy by mother/female,
increased mother's support of male-role taking by boy,
managing sibling interaction;
changing parental social life to facilitate boy's play dates, etc.;
increased attention to gender-typical behavior;
decreased attention to gender-atypical behavior;
distraction from cross-gender behavior rather than prohibition;
making it worthwhile to be a boy;
Focus: Peers
identifying suitable male peers for play dates;
increased play dates with male peers (5×/week),
initially one boy at a time, later more;
decreased play dates with female peers;
increased extracurricular activities with boys:
e.g., clubs, teams, scouts, camps.

life altogether, because of an overloaded work schedule or for other reasons. Improving the GID boy's relationship with his father often requires a change of the established intrafamiliar alignments. Such changes can cause significant stress and anxiety for the parents, the boy with GID, and other children in the family, and may bring to the surface conflicts and issues that need to be dealt with by whatever treatment modality – dynamic or other – appears suited. Additional stress is created by the requirement of increased peer contacts (see later). In the 4–6 years age group, such peer contacts must usually be initiated and at least for a while maintained by contacts between the parents involved. If, as is typical, suitable playmates are not among the social circle of the GID boy's parents, the parents have to establish new contacts with other parents, which in most cases implies decreased time with their habitual circle of friends, especially when we also have to decrease play dates with girls of the boy's age group.

Responding to cross-gender behavior When they bring their child for evaluation, most parents of boys with GID have already started to interfere with their son's cross-gender behavior. Parents usually resort to blunt critique and prohibition which, in our experience, may make the child go underground and hide his cross-gender interests from view without genuinely changing his cross-gender identity. We have seen dramatic examples of a 'double gender life' in some adolescents that seemed to have developed on this basis. To prevent such developments we train the parents in using 'attention management' instead of prohibition, i.e. giving the child positive attention when he engages in gender-neutral or masculine activities and no attention, not positive and especially also not negative ('benign neglect'), when he resorts to cross-gender activities. In addition, once the parents have become aware of typical antecedent situations or contexts when the child is likely to get into cross-gender activities, we work out with the parents suitable ways of 'distracting' the boy from initiating cross-gender behavior.

Peer relations From the first or second treatment session on, we introduce the focus on the boy's peer relations. We set as a goal five play dates per week with other boys (including weekend days), to be attained within about six weeks. This does not include school and, at least initially, also not other organized group activities. To this end, the parents need to start with identifying suitable boys for such play dates, that is, boys who neither have a cross-gender problem of their own nor are too rough, and who are within about half a year of the GID boy's age. Also, the parents must be sufficiently comfortable with the social background of the potential playmates so that they can build relationships with the playmates' parents which is a prerequisite for play dates at this age.

Typical initial problems that arise with the introduction of play dates with other boys are the disinterest or resistance of the boy with GID, or his withdrawal to his sister if he has one, the tendency for male playmates to associate with other boys in the family rather than the boy with GID, and the preference of the boys with GID to associate with the sister of a male playmate if available. Such problems require patience, prudent selection of playmates, and careful arrangements of play dates, and many parents need help in this area.

Initially, only one boy at a time is invited to a play date. Later, the play dates can be enhanced by having two or more boys present – a much more difficult task to handle for the boy with GID. Initial play dates should take place in a setting that allows for spontaneous play and interaction between the boys – which in the beginning may require some help from the parents such as suggesting activities and, occasionally, smoothing conflict – rather than organized group activities. Thus, the family's home or yard is a better place than a sports team or a visit to the local mall with the parents. Once the GID

boy has become comfortable with other boys, the peer dates can be expanded to include extracurricular group activities, preferably including his new friends.

Miscellaneous issues A recurrent problem is the maintenance of a boy's GID outside the family, for instance by a grandmother or an aunt the boy visits frequently. If the parents are unable to influence the situation in such cases, we invite the outside family members to join selected sessions with the parents. More frequently, it is the nursery school or kindergarten setting that contributes to the maintenance of GID by providing extensive opportunities for cross-gender behavior, especially in the ubiquitous dress-up corner. Interventions here can be delicate because of the need to avoid stigmatization of the boy or stimulation of the parents' fear of such stigmatization. Our management of this problem ranges from direct meetings or telephone conversations with the teachers to change of school.

Attendance at summer camp can be either detrimental to the treatment goals or very useful, depending on the circumstances. All-boys camps are rarely available for this age group. Among co-ed camps we prefer those that engage in some degree of segregation of boys and girls, and if there is a choice of activities, we suggest that boys with GID, while in treatment, are not signed up for group activities preferentially chosen by girls such as ballet dancing or gymnastics. However, signing GID boys up for activities preferentially chosen by boys, especially team sports, requires some skill acquisition by the GID boy well before the start of the summer camp; otherwise the experience may be totally negative and counterproductive to the goals of therapy.

Many boys with GID show special artistic interests and talents. The introduction of the male peer group is not meant to replace those interests by the development of more stereotypical masculine activities such as team sports. Thus, for boys with artistic talents, it is particularly important that the parents select playmates whose interests and talents overlap with those of their GID boy or who at least do not denigrate such activities.

A clinical treatment review

To gauge the effectiveness of this treatment approach, we conducted a clinic-chart review. In our clinic, the therapist dictates very detailed reports for each evaluation session as well as progress notes for each treatment session. The latter cover in detail the parents' reports of the child's behavior and their reactions to it (based on their diary notes during the preceding interval), the suggestions made by the therapist or elicited from the parents, and the evaluation of goal attainment and any other justification of decisions made jointly with the parents regarding the interval to the next visit, the termination of regular visits, and the termination of follow-up visits or phone calls. Attainment of the goals (Table 4) is based on parents' reports: joint activities of father and son and the boy's readiness to spend time with his father, joint activities of the boy with his male peers and his active pursuit of play dates by phone calls, etc., the boy's engagement in gender-typical activities, his apparent acceptance by male peers, and the absence of statements indicating gender dysphoria. Transcripts of these dictations and the parents' diary notes are kept in the chart. Review of these materials by the author are the basis for the findings below.

Sample

The sample consisted of a consecutive series of boys below age 7 years, who were referred to our unit for an evaluation of a gender identity problem. They were diagnosed as either having GID or GID Not Otherwise Specified (GID NOS) by DSM-IV criteria, did not have a problem of somatic intersexuality, and their parents decided for treatment

at our clinic. In all cases, the clinic records were reviewed after termination of the treatment.

Results

The sample consisted of 11 boys, 10 non-Hispanic Caucasian and 1 Hispanic. Age at evaluation ranged from 3 years, 11 months to 6 years, 3 months, with a median at 4 years, 9 months. All families were middle-class. The mother was present in the household in all families, the father in 10 of the 11 families (although this was not a selection criterion for treatment). Eight boys were diagnosed as having GID of childhood, and three as GID NOS.

Treatment of the GID was terminated in most cases when the goals (Table 4) were fully reached. Ten of the 11 cases showed such marked improvement; only one did not and was, therefore, judged to be unsuccessful. The total number of treatment visits per family ranged from 4–19 (median 10). In some cases, treatment for other family problems such as marital conflict or individual psychiatric problems of the parents, continued after treatment of the child's GID was completed. Follow-up was done mostly by telephone. The duration of follow-up was left to the parents and varied, up to several years. There was no significant recurrence of GID or GID NOS in the 10 successful cases, although several parents reported *occasional* recurrence of some cross-gender activities, especially during the first winter following treatment when children are homebound and peer contacts diminished.

Discussion

As the chart review data showed, a relatively short-term parent-mediated peer-centered treatment approach to GID appears promising. The speed of GID fading was remarkable and supports our clinical impression that psychosocial factors play a major role in the development of GID in preschoolers. Note that fathers were present in all families but one, and it was the family without a father in which we were unsuccessful. (In the latter family which included, along with the boy, several adolescent and young adult daughters, the father had died about a year before his son's referral to us, and the mother had difficulties attending weekly clinic visits, setting up frequent play dates, and finding an alternative father figure.) One of the good effects of the treatment protocol was an increase of father–son involvement and an improvement of the father–son relationship in most families.

The way we think this treatment works can be conceptualized as follows. Joint activities with the father – suitably selected and gradually developed – will increase the GID boy's attachment to him which will then facilitate the boy's projection of himself into the future in a masculine (father-like) gender role. Once the boy's attachment to the father has increased, the boy will also be more responsive to the gender role reinforcements provided by his father. This is important because fathers are usually stronger sex typers than are mothers (Fagot, 1985). If mother or another woman who has previously supported the boy's feminine behavior can be brought to the point at which she is able to support the male gender-role behavior of her boy, it will further help with the boy's self-image development. Activities with other boys will help establish familiarity with boys and build up male gender skills and habits. They will also compete with the display of cross-gender behavior. The skill acquisition, in turn, will help to decrease the boy's discomfort with male peers. We usually see that with increasing exposure to male peers there is also a gradually increasing attachment to other boys. Being attached to other boys will make it easier for the GID boy to look towards his male peers as gender-role

models and to respond more strongly to their gender role reinforcements. Improvement of the GID boy's social competence with boys is another outcome. All of the above processes tend to strengthen the GID boy's identification as a male and to increase his self-socialization as a male.

The treatment rationale presented here left aside the more complex formulations of GID development as presented from a psychodynamic perspective, especially by Coates et al. (1991). We do not doubt that the internal processes involved in GID development and treatment are more complex than sketched out here, but they are difficult to validly document. However, the success of our treatment approach suggests that, at least for rather young boys with GID, intense and costly psychodynamic therapy may not be necessary. In any case, systematic controlled treatment studies are required to decide such questions.

The development of our treatment approach is still in its beginning, and further improvements are desirable. It is likely, for instance, that the program would profit from incorporating some of the techniques used elsewhere to facilitate children's peer relations (Schneider, 2000).

Based on our clinical experience, we think that this type of treatment is appropriate only for relatively young children of preschool age or early school age, and will become progressively more difficult to use, the older the child is at referral. Not only does the symptomatology at the older age seem more resistant to change, but also more of the older children with GID have additional behavior problems, as Zucker (1990) documented, and they appear to come from families with more mental-health problems. This treatment protocol is not at all suitable for children of pubertal age and older when management of GID through the parents is inappropriate.

The next step in the development of our treatment approach is its full manualization. On that basis, a formal randomized clinical trial should be conducted that includes evaluation of the outcome independent of the treating therapist. The challenge of such a clinical trial lies in finding a suitable placebo treatment condition. If that is not possible, the feasibility of employing waiting-list controls would have to be explored.

References

Achenbach, T.M. (1991). *Manual for the Child Behavior Checklist/4–18 and 1991 Profile*. Burlington: University of Vermont Department of Psychiatry.

American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: American Psychiatric Press.

Bates, J.E., & Bentler, P.M. (1973). Play activities of normal and effeminate boys. *Developmental Psychology, 9*, 20–27.

Bates, J.R., Bentler, P.M., & Thompson, S.K. (1973). Measurement of deviant gender development in boys. *Child Development, 44*, 591.

Becker, D.F., & Meyer-Bahlburg, H.F.L. (1984). *Questionnaire for Child Sexual Behavior (QCSB)*. Unpublished.

Blanchard, R., Zucker, K.J., Bradley, S.J., & Hume, C.S. (1995). Birth order and sibling sex ratio in homosexual male adolescents and probably prehomosexual feminine boys. *Developmental Psychology, 31*, 22–30.

Boivin, M., Hymel, S., & Bukowski, W.M. (1995). The roles of social withdrawal, peer rejection, and victimization by peers in predicting loneliness and depressed mood in childhood. *Development and Psychopathology, 7*, 765–785.

Bradley, S.J., & Zucker, K.J. (1997). Gender identity disorder: A review of the past 10 years. *Journal of the American Academy of Child and Adolescent Psychiatry, 36*, 872–880.

Coates, S., Friedman, R.C., & Wolfe, S. (1991). The etiology of boyhood gender identity disorder: A model for integrating temperament, development, and psychodynamics. *Psychoanalytic Dialogues, 1*, 481–523.

Coates, S., Hahn-Burke, S., Wolfe, S., Shindledecker, R., & Nierenberg, O. (1994). Sensory reactivity in boys with gender identity disorder: A comparison with matched controls. American Academy of Child & Adolescent Psychiatry, 41st annual meeting, New York, 25–30 October 1994. *Scientific Proceedings of the Annual Meeting*, p. 79, NR-167.

Coates, S., & Person, E.S. (1985). Extreme boyhood femininity: Isolated behavior or pervasive disorder? *Journal of the American Academy of Child Psychiatry, 24*, 702–709.

Coates, S., & Wolfe, S. (1995). Gender identity disorder in boys: the interface of constitution and early experience. *Psychoanalytic Inquiry, 15*, 6–38.

Coates, S., Wolfe, S., & Hahn-Burke, S. (1994). Do boys with gender identity disorder have a shy, inhibited temperament? American Academy of Child & Adolescent Psychiatry, 41st annual meeting, New York, 25–30 October 1994. *Scientific Proceedings of the Annual Meeting*, p. 79, NR-168, 1994.

Corbett, K. (1998). Cross-gendered identifications and homosexual boyhood: Toward a more complex theory of gender. *American Journal of Orthopsychiatry, 68*, 352–360.

Cosentino, C.E., Meyer-Bahlburg, H.F.L., Alpert, J.L., & Gaines, R. (1993). Cross-gender behavior and gender conflict in sexually abused girls. *Journal of the American Academy of Child and Adolescent Psychiatry, 32*, 940–947.

Di Ceglie, D. (1998). Management and therapeutic aims in working with children and adolescents with gender identity disorders, and their families. In D. Di Ceglie & D. Freedman (Eds.), *A stranger in my own body. Atypical gender identity development and mental health* (pp. 185–197). London: Karnac Books.

Fagot, B.I. (1985). Beyond the reinforcement principle: Another step toward understanding sex role development. *Developmental Psychology, 21*, 1097–1104.

Fagot, B.I., & Leinbach, M.D. (1989). The young child's gender schema: Environmental input, internal organization. *Child Development, 60*, 663–672.

Fridell, S.R. (2001). *Sex-typed play behavior and peer relationships of boys with gender identity disorder*. Unpublished doctoral dissertation, University of Toronto, Ontario, Canada.

Green, R. (1974). *Sexual identity conflict in children and adults*. New York: Basic Books.

Green, R. (1987). *The 'sissy boy syndrome' and the development of human sexuality*. New Haven, CT: Yale University Press.

Hawker, D.S.J., & Boulton, M.J. (2000). Twenty years' research on peer victimization and psychosocial maladjustment: A meta-analytic review of cross-sectional studies. *Journal of Child Psychology and Psychiatry, 41*, 441–455.

Huston, A.C. (1983). Sex-typing. In P.H. Mussen & E.M. Hetherington (Eds.), *Handbook of child psychology. Vol. IV. Socialization, personality, and social development* (pp. 387–467). New York: Wiley.

Isay, R.A. (1997, November 21). Remove gender identity disorder in DSM. *Psychiatric News, 32*(9), 13.

Johnson, J.G., Cohen, P., Kasen, S., Smailes, E., & Brook, J.S. (2001). The association of maladaptive parental behavior with psychiatric disorder among parents and their offspring. *Archives of General Psychiatry, 58*, 453–460.

Katz, P.A., & Walsh, P.V. (1991). Modification of children's gender-stereotyped behavior. *Child Development, 62*, 338–351.

Kohlberg, L. (1966). A cognitive-developmental analysis of children's sex-role concept and attitudes. In E.E. Maccoby (Ed.), *The development of sex differences* (pp. 82–173). Stanford, CA: Stanford University Press.

Kruijver, F.P.M., Zhou, J.-N., Pool, C.W., Hofman, M.A., Gooren, L.J.G., & Swaab, D.F. (2000). Male-to-female transsexuals have female neuron numbers in a limbic nucleus. *Journal of Clinical Endocrinology & Metabolism, 85*, 2034–2041.

Maccoby, E.E. (1998). *The two sexes: Growing apart, coming together*. Cambridge, MA: Belknap Press.

Maccoby, E.E, & Jacklin, C.N. (1987). Gender segregation in childhood. In H.W. Reese (Ed.), *Advances in child development and behavior* (Vol. 20, pp. 239–287). Orlando, FL: Academic Press.

Marantz, S., & Coates, S. (1991). Mothers of boys with gender identity disorder: A comparison of matched controls. *Journal of the American Academy of Child and Adolescent Psychiatry, 30*, 310–315.

Martin, C.L., & Fabes, R.A. (2001). The stability and consequences of young children's same-sex peer relations. *Developmental Psychology, 37*, 431–446.

McHale, S.M., Crouter, A.C., & Tucker, C.J. (1999). Family context and gender role socialization in middle childhood: Comparing girls to boys and sisters to brothers. *Child Development, 70*, 990–1004.

Meyer, J.K., & Dupkin, C. (1985). Gender disturbance in children: An interim clinical report. *Bulletin of the Menninger Clinic, 49*, 236.

Meyer-Bahlburg, H.F.L. (1984). *Gender Risk Scale (GRS)*. Unpublished.

Meyer-Bahlburg, H.F.L. (1993). Psychobiologic research on homosexuality. *Child and Adolescent Psychiatric Clinics of North America, 2*(3), 501–512.

Meyer-Bahlburg, H.F.L. (1994). Intersexuality and the diagnosis of gender identity disorder. *Archives of Sexual Behavior, 23*, 21–40.

Meyer-Bahlburg, H.F.L. (1999). Variants of gender differentiation. In H.-C. Steinhausen & F.C. Verhulst (Eds.), *Risks and outcomes in developmental psychopathology* (pp. 298–313). Oxford, UK: Oxford University Press.

Meyer-Bahlburg, H.F.L., & Ehrhardt, A.A. (1988a) *Gender-role Assessment Schedule – Child (GRAS-C)* (1988–2 ed.). Unpublished.

Meyer-Bahlburg, H.F.L., & Ehrhardt, A.A. (1988b) *Mother Form of Gender-role Assessment Schedule – Child (M-GRAS-C)* (1988–2 ed.). Unpublished.

Meyer-Bahlburg, H.F.L., Sandberg, D.E., Dolezal, C.L., & Yager, T.J. (1994). Gender-related assessment of childhood play. *Journal of Abnormal Child Psychology, 22*, 643–660.

Meyer-Bahlburg, H.F.L., Sandberg, D.E., Yager, T.J., Dolezal, C.L., & Ehrhardt, A.A. (1994). Questionnaire scales for the assessment of atypical gender development in girls and boys. *Journal of Psychology and Human Sexuality, 6*, 19–39.

Minter, S. (1999). Diagnosis and treatment of gender identity disorder in children. In M. Rottnek (Ed.), *Sissies and tomboys. Gender nonconformity and homosexual childhood* (pp. 9–33). New York: New York University Press.

Pleak, R.R. (1999). Ethical issues in diagnosing and treating gender-dysphoric children and adolescents. In M. Rottnek (Ed.), *Sissies and tomboys. Gender nonconformity and homosexual childhood* (pp. 34–51). New York: New York University Press.

Rekers, G.A. (1975). Stimulus control over sex-typed play in cross-gender identified boys. *Journal of Experimental Child Psychology, 20*, 136–148.

Rekers, G.A. (1977). Assessment and treatment of childhood gender problems. In B.B. Lahey & A.E. Kazdin (Eds.), *Advances in clinical child psychology* (Vol. 1, p. 267). New York: Plenum Press.

Rekers, G.A. (1985). Gender identity problems. In P.A. Bornstein & A.E. Kazdin (Eds.), *Handbook of clinical behavior therapy with children* (p. 658). Homewood, IL: Dorsey.

Rekers, G.A., Kilgus, M., & Rosen, A.C. (1990). Long-term effects of treatment for gender identity disorder of childhood. *Journal of Psychology and Human Sexuality, 3*, 121.

Richardson, J. (1996). Setting limits on gender health. *Harvard Review of Psychiatry, 4*, 49–53.

Richardson, J. (1999). Response: Finding the disorder in gender identity disorder. *Harvard Review of Psychiatry, 7*, 43–50.

Rust, J., Golombok, S., Hines, M., & Johnston, K. (2000). The role of brothers and sisters in

the gender development of preschool children. *Journal of Experimental Child Psychology, 77*, 292–303.

Sameroff, A.J. (1997). Understanding the social context of early psychopathology. In J.D. Noshpitz (Series Ed.), S. Greenspan, S. Wieder, & J. Osofsky (Vol. Eds.), *Handbook of child and adolescent psychiatry, Vol. I, Infants and preschoolers: Development and syndromes* (pp. 224–236). New York: Wiley.

Sandberg, D.E., & Meyer-Bahlburg, H.F.L. (1994). Variability in middle childhood play behavior: Effects of gender, age, and family background. *Archives of Sexual Behavior, 23*, 645–663.

Sandberg, D.E., Meyer-Bahlburg, H.F.L., Ehrhardt, A.A., & Yager, T.J. (1993). The prevalence of gender-atypical behavior in elementary school children. *Journal of the American Academy of Child and Adolescent Psychiatry, 32*, 306–314.

Schneider, B.H. (2000). *Friends and enemies. Peer relationships in childhood*. New York: Oxford University Press.

Zeanah, C.H., Boris, N.W., & Larrieu, J.A. (1997). Infant development and developmental risk: A review of the past 10 years. *Journal of the American Academy of Child and Adolescent Psychiatry, 36*, 165–178.

Zhou, J.-N., Hofman, M.A., Gooren, L.J.G., & Swaab, D.F. (1995). A sex difference in the human brain and its relation to transsexuality. *Nature, 378*, 68–70.

Zucker, K.J. (1985). Cross-gender-identified children. In B.W. Steiner (Ed.), *Gender dysphoria. Development, research, management*. New York: Plenum.

Zucker, K.J. (1990). Psychosocial and erotic development in cross-gender identified children. *Canadian Journal of Psychology, 35*, 487.

Zucker, K.J. (1999a). Commentary on Richardson's (1996) 'Setting limits on gender health'. *Harvard Review of Psychiatry, 7*, 37–42.

Zucker, K.J. (1999b). Gender identity disorder in the DSM-IV [Letter to the editor]. *Journal of Sex and Marital Therapy, 25*, 5–9.

Zucker, K.J. (2001). Gender identity disorder in children and adolescents. In G.O. Gabbard (Ed.), *Treatments of psychiatric disorders* (3rd ed.) (Vol. 2, pp. 2069–2094). Washington, DC: American Psychiatric Press.

Zucker, K.J., & Bradley, S.J. (1995). *Gender identity disorder and psychosexual problems in children and adolescents*. New York: Guilford Press.

Zucker, K.J., Bradley, S.J., Doering, R.W., & Lozinski, J.A. (1985). Sex-typed behavior in cross-gender-identified children: Stability and change at a one-year follow-up. *Journal of the American Academy of Child Psychiatry, 24*, 710.

Zucker, K.J., Bradley, S.J., Lowry Sullivan, C.B., Kuksis, M., Birkenfeld-Adams, A., & Mitchell, J.N. (1993). A gender identity interview for children. *Journal of Personality Assessment, 61*, 443–456.

Zucker, K.J., Wild, J., Bradley, S.J., & Lowry, C.B. (1993). Physical attractiveness of boys with gender identity disorder. *Archives of Sexual Behavior, 22*, 23–24.