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Since the second edition of the *Handbook of Developmental Psychopathology* was published 14 years ago (Sameroff, Lewis, & Miller, 2000), there has been a remarkable increase in clinical, research, and media attention afforded to children and adolescents who meet the DSM-IV-TR (American Psychiatric Association, 2000) diagnostic criteria for Gender Identity Disorder (GID), which, as I will note in more detail below, has been somewhat reconceptualized and renamed as gender dysphoria (GD) in the DSM-5 (American Psychiatric Association, 2013). In this chapter, I will provide an update on the GD diagnosis, drawing on new data sets that have become available since the prior volume of this handbook (Zucker, 2000). I will also consider new lines of research that have considered the interface between what we know about typical and atypical gender development.

Phenomenology

Children and adolescents with GD show an array of sex-typed behaviors that suggest a strong identification with the opposite sex. In many

respects, GD is a deeply phenomenological and subjective condition. Children and adolescents match their felt gender identity in a sociocultural context in which they have the opportunity to observe and learn how boys and girls/men and women are categorized and behave (Fausto-Sterling, Garcia Coll, & Lamarre, 2012; Martin, Ruble, & Szkrybalo, 2002; Owen Blakemore, Berenbaum, & Liben, 2009; Ruble, Martin, & Berenbaum, 2006). The surface expression of GD can be constructed only in relation to what is normatively sex dimorphic in a particular culture and in a particular historical time period. Since GID was first described in the DSM-III (American Psychiatric Association, 1980) 30+ years ago, its surface manifestations in children have been characterized by several parameters: toy and activity interests, peer affiliation preferences, roles in fantasy and pretend play, and in cross-dressing. There is also a marked rejection or avoidance of behaviors typically associated with one's natal sex. In addition, both children and adolescents express a strong desire to be of the other gender (or some alternative gender that departs from one's assigned gender at birth). Some children go beyond the mere desire to be of the other gender: they declare that they "are" the other gender. In some children and almost always in adolescents, there is an accompanying desire to be rid of the sex-related somatic features associated with the natal sex and the desire to change one's body to match that of the desired gender. Two examples illustrate this phenomenology:

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Case Example 1

Frank is a 4-year-old natal male who was referred by his parents because of concerns that he was unhappy as a boy. At the age of 2, he became quite interested, if not preoccupied, with female characters that he saw in films, such as Ariel from *The Little Mermaid*. In his mother's words, he became "obsessed" with long hair and would spend hours creating long hair using string, which he would attach to popsicle sticks or pencils. He would "beg" his mother to allow him to brush and stroke her hair during the day and at bedtime. He often would put long towels on his head to simulate long hair. By age 3, he was primarily interested in stereotypical feminine objects and activities, such as Barbie dolls, and adopted female roles in fantasy play (he would enact being his mother or one of his three nannies). He preferred to play with girls and complained that boys were too rough and vile ("They say bad words, mommy"). By age 4, Frank began to verbalize the desire to be a girl or that he "was" a girl. He has not verbalized any negative feelings about his sexual anatomy. At first, Frank's parents thought that his behavior was a phase because he was surrounded by females (his mother, the three female nannies, and the daughters of mother's female friends) and that his father was much less salient because of work commitments, which led him to be away from home in total for 3 months of each calendar year. Because Frank was now entering preschool, the parents were worried that his marked cross-gender identification would lead to social ostracism within the peer group. The parents sought out advice as to how to best deal with Frank's apparent rejection of himself as a boy and his desire to be a girl.

Case Example 2

Diane is a 14-year-old natal female who was referred by a school social worker. Diane had been truant from school for weeks on end. When seen by the social worker, Diane presented phenotypically as an adolescent boy, based on hairstyle and clothing style. Diane self-identified

as "trans," had adopted the given name of James, and asked that the social worker use male pronouns in talking to the teachers and principal about "her." As a child, Diane had stereotypical masculine interests and activity choices. Diane always enacted male roles in fantasy play. By age 5, Diane refused to wear stereotypical girls' clothing. Diane had her hair cut short and was often perceived by strangers and new peers to be a boy. However, through the elementary school years, the teachers would ask Diane to "line up" with the girls when gender segregation activities were required (e.g., attending gym class), and this led, in part, to a lot of social ostracism. Diane was referred to as a "boy-girl" or as an "in-between." During childhood, Diane never verbalized the desire to be a boy, and her mother, with whom she lived, commented that she simply thought that her daughter was a "tomboy." By late childhood, Diane had become quite oppositional and, in adolescence, was often depressed. Frequent self-harm (cutting to the forearms) led to several emergency room visits. With the development of secondary sex characteristics at puberty (e.g., breast development) and the onset of menses, Diane became more distraught. She would conceal her breasts by wearing layers of t-shirts and would avoid going outside during the summer months. According to her mother, Diane's reaction to menarche was "dreadful." At the time of assessment, James indicated a strong desire for male sex hormones (testosterone) and asked about the possibility of surgery to remove her breasts. James reported a sexual attraction to females. James self-identified as "straight" because "I have the mind of a boy." The idea of adopting a lesbian sexual identity was abhorrent ("I got nothing against lesbians, but I'm not one of those").

Referral Rates, Diagnosis, and Assessment

Referral Rates

The epidemiology of GD is still quite uncertain other than the fact that it is a relatively uncommon psychiatric diagnosis compared to many

other diagnoses that can be applied to children and adolescents. We do know somewhat more about sex differences in referral rates and recent changes in the number of referred children and adolescents to specialized gender identity clinics (as summarized in Wood et al., 2013). Three facts will be noted here: first, among children (12 years of age and younger), the sex ratio favors boys. In our clinic for children and youth, for the years 1975–2011, the sex ratio for children was 4.49:1 of boys to girls ($N=577$), which was significantly larger than the 2.02:1 sex ratio of boys to girls ($N=468$) from the Amsterdam clinic in the Netherlands. Second, for our adolescent cases, the sex ratio was near parity, at 1:04:1 of boys to girls ($N=253$), quite comparable to the Dutch sex ratio of 1.01:1 ($N=393$). Third, the number of referred adolescent cases has increased dramatically over the past 8 years, with an almost fivefold increase in annual referrals from prior years.

The sex difference in child referrals likely reflects the greater tolerance for gender-variant behavior in natal females compared to natal males. Thus, the threshold for referrals seems to be higher for girls, and, indeed, some studies have shown that GD girls display more marked cross-gender behavior than GD boys (Cohen-Kettenis, Owen, Kaijser, Bradley, & Zucker, 2003; Wallien et al., 2009; Zucker, Bradley, & Sanikhani, 1997a). By adolescence, however, the sex ratio is likely reduced because both natal males and females show comparable intensity levels of GD. As noted above, the Toronto clinic has a higher proportion of referred boys than the Amsterdam clinic. Two factors may account for this finding. First, the threshold for referral appears to be higher in the Netherlands than it is in Toronto, in the sense that the Dutch children appear to show more extreme gender-variant behaviors than the Toronto children (e.g., Cohen-Kettenis et al., 2006; Steensma, Zucker, Kreukels et al., 2013; Wallien et al., 2009). Second, in the Netherlands, it is quite rare for a child to be referred at the age of 5 years or younger, whereas in the Toronto clinic the percentage is much higher (2.3 % vs. 22.6 %) (Cohen-Kettenis et al., 2003). This is important because, among children

5 years of age or younger in the Toronto clinic, the sex ratio is highly skewed (e.g., among 3–4-year-olds, the sex ratio was an astonishing 33:1 of boys to girls).

Diagnosis

In Zucker (2000), I summarized the changes in the GID diagnostic criteria for children that appeared in the DSM-IV, compared to the DSM-III and the DSM-III-R. Here, I will summarize six substantive changes in the DSM-5 criteria compared to the DSM-IV. Table 35.1 shows the diagnostic criteria for gender dysphoria in the DSM-5.

1. The first change pertains to a relabeling of the diagnostic label: Gender Dysphoria instead of Gender Identity Disorder. There were a few reasons for this. Some critics argued that it is not gender identity that is “disordered” per se, but that it is the distress that accompanies the incongruence between one’s assigned gender at birth (almost always in synchrony with one’s presumed natal sex: boy = male; girl = female). Initially, the Gender Identity Disorders subworkgroup, which was part of the DSM-5 Work Group on Sexual and Gender Identity Disorders, had proposed the term Gender Incongruence as an alternative label, but some critics felt that this was a bit too vague (De Cuypere, Knudson, & Bockting, 2010). Thus, the Gender Identity Disorders subworkgroup proposed a second alternative—Gender Dysphoria. This proposed relabeling received a fair amount of positive support during the second and third phases in which professionals and the general public could provide feedback on the DSM-5 website. The term gender dysphoria has a long history in clinical sexology (e.g., Fisk, 1973) and was thus deemed to be one that would be familiar to specialists.¹

¹I was the Chair of the DSM-5 Work Group on Sexual and Gender Identity Disorders. Peggy T. Cohen-Kettenis was the Chair of the subworkgroup on Gender Identity Disorders.

Table 35.1 DSM-5 diagnostic criteria for gender dysphoria

- A. A marked incongruence between one's experienced/expressed gender and assigned gender, of at least 6 months duration, as manifested by at least six of the following (one of which must be Criterion A1):
1. A strong desire to be of the other gender or an insistence that one is the other gender (or some alternative gender different from one's assigned gender).
 2. In boys (assigned gender), a strong preference for cross-dressing or simulating female attire; or in girls (assigned gender), a strong preference for wearing only typical masculine clothing and a strong resistance to the wearing of typical feminine clothing.
 3. A strong preference for cross-gender roles in make-believe play or fantasy play.
 4. A strong preference for the toys, games, or activities stereotypically used or engaged in by the other gender.
 5. A strong preference for playmates of the other gender.
 6. In boys (assigned gender), a strong rejection of typically masculine toys, games, and activities and a strong avoidance of rough-and-tumble play; or in girls (assigned gender), a strong rejection of typically feminine toys, games, and activities
 7. A strong dislike of one's sexual anatomy.
 8. A strong desire for the primary and/or secondary sex characteristics that match one's experienced gender.
- B. The condition is associated with clinically significant distress or impairment in social, school, or other important areas of functioning.

Specify if:

With a disorder of sex development (e.g., a congenital adrenogenital disorder such as... congenital adrenal hyperplasia or...androgen insensitivity syndrome).

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2. In DSM-5, the proposed introductory descriptor reads as follows: "A marked incongruence between one's experienced/expressed gender and assigned gender, of at least 6 months' duration, as manifested by at least..." In the DSM-IV-TR, the introductory descriptor read as follows: "A strong and persistent cross-gender identification..."

The reasons for the proposed changes were as follows: (1) the use of the term "incongruence" is a descriptive one that better reflects the core of the problem, namely, on the one hand, an incongruence between the identity

that one experiences and expresses and, on the other hand, how one is expected to live based on one's assigned gender (usually at birth) (Meyer-Bahlburg, 2010). This was deemed preferable to the term "cross-gender identification" in that a strictly binary gender identity concept is no longer in line with the spectrum of gender identity variations that one sees clinically. (2) The term "sex" has been replaced by assigned "gender" in order to make the criteria applicable to individuals with a disorder of sex development (DSD) (see below) (Meyer-Bahlburg, 2009, 2010). During the course of physical sex differentiation, some aspects of biological sex (e.g., 46, XY genes) may be incongruent with other aspects (e.g., the external genitalia); thus, using the term "sex" would be confusing.

3. The third change pertains to the collapsing of the Point A ("A strong and persistent cross-gender identification...") and Point B ("Persistent discomfort with his or her sex, or a sense of inappropriateness in the gender role of that sex") criteria for GID that were present in the DSM-IV. Although the DSM-IV Subcommittee on Gender Identity Disorders (Bradley et al., 1991) had already recommended this change, this suggestion was not implemented. The DSM-5 Gender Identity Disorders subworkgroup persisted in recommending this change: the distinction between the Point A and B criteria is not supported by factor analytic studies suggesting that the concept of GD was best captured by one underlying dimension (e.g., Deogracias et al., 2007; Johnson et al., 2004; Singh et al., 2010; Steensma et al., *in press*; Zucker et al., 1998) as well as Mokken scale analysis for the adolescent/adult symptoms (Paap et al., 2011).

4. The fourth change pertains to a tightening of the threshold for diagnosis in children. In DSM-IV and DSM-IV-TR, it was possible to receive a diagnosis of GID in the absence of an expressed desire to be of the other gender and/or in the absence of an expressed discomfort with one's sexual anatomy. In this situation, a child could receive the diagnosis if he or she manifested all of the other symptoms, which were all markers of a strong cross-gender

identification and a rejection of behaviors associated with one's natal gender. The reasoning behind this decision was that some clinicians felt that there were a small number of children who likely had a GID, but did not express it, perhaps because of a sense of social inhibition or opprobrium (Bradley et al., 1991).

Since the DSM-IV (American Psychiatric Association, 1994) was published, some critics expressed concern that this diagnostic algorithm might not accurately distinguish between children with a bona fide GID and children with marked gender-variant behavior who did not experience any discomfort with their gender identity (for review, see Zucker, 2010). In an analysis of secondary data sets, Zucker (2010) showed that there was a reliable association between the degree to which mothers indicated that their child expressed the wish to be of the other gender and the degree to which their child manifested surface indicators of cross-gender behavior and also the degree to which the child indicated the desire to be of the other gender (and other indicators of gender dysphoria) on a structured diagnostic interview. In part because of these supporting data sets, the DSM-5 criteria require that the "strong desire" to be of the other gender or the insistence that one is of the other gender is a necessary, but not sufficient, criterion for the diagnosis to be made. This change will likely make the threshold for the diagnosis somewhat more conservative and should, in theory, reduce the stigmatization of gender nonconforming children who do not experience gender dysphoria.

5. For the adolescent/adult criteria, the diagnostic criteria are more nuanced than they were in the DSM-IV and, unlike the DSM-IV criteria, are represented in a polythetic format.

Based on secondary data analysis, it was proposed that the presence of at least two indicators (out of 6) would be required to meet the diagnostic criteria for GD. This was based on an analysis of 154 adolescent and adult patients with GID compared to 684 controls (Deogracias et al., 2007; Singh et al., 2010). From a 27-item dimensional measure of gender dysphoria, the Gender Identity/Gender

Dysphoria Questionnaire for Adolescents and Adults (GIDYQ), five items were extracted that corresponded to the A2–A6 indicators (we could not extract a corresponding item for A1). Each item was rated on a 5-point response scale, ranging from never to always, with the past 12 months as the time frame. In this analysis, a symptom was coded as present if the participant endorsed one of the two most extreme response options (frequently or always) and as absent if the participant endorsed one of the three other options (never, rarely, sometimes). This yielded a true positive rate of 94.2 % and a false-positive rate of 0.7 %. These findings suggest that the proposed diagnostic criteria will have a very high true positive rate and a very low false-positive rate.

6. In DSM-III, the presence of a physical intersex condition (now termed a DSD) was not an exclusionary criterion for GID, but it became one in DSM-IV (see Meyer-Bahlburg, 1994). Over the past 20 years, considerable additional evidence has accumulated that some individuals with a DSD experience GD and may wish to change their assigned gender; the percentage of such individuals who experience GD is syndrome dependent (see, e.g., Meyer-Bahlburg, 1994, 2005, 2009, 2010; Pasterski et al., 2013). From a phenomenological perspective, DSD individuals with GD have both similarities and differences to individuals with GD with no known DSD (Meyer-Bahlburg, 1994, 2009; Richter-Appelt & Sandberg, 2010). Developmental trajectories also show similarities and differences. In DSM-5, the presence of a DSD is coded as a subtype. Its presence is suggestive of a specific causal mechanism that may not be present in individuals without a diagnosable DSD.

Assessment

Biomedical Tests

Because GD is overrepresented among specific DSDs, including congenital adrenal hyperplasia (CAH) in genetic females, in various androgen-resistant conditions in genetic males (e.g., partial androgen insensitivity syndrome)

who are assigned to the female gender at, or shortly after, birth, in genetic males with penile agenesis or cloacal exstrophy who are assigned to the female gender (also at birth or shortly thereafter), it is important to inquire about any physical signs of these conditions; however, it is rare that these conditions have not already been diagnosed prior to a clinical assessment for GD. An exception to this might be instances of adolescent-onset DSDs, such as nonclassical (late-onset) CAH, or an endocrine condition called polycystic ovary syndrome, with its consequent androgenization effects. In the latter condition, some studies have found an elevated percentage of GD patients, but other studies have not (e.g., Baba et al., 2011; Mueller et al., 2008). In the absence of a known DSD, karyotyping of the sex chromosomes is invariably congruent with the assigned gender at birth (Inoubli et al., 2011).

Psychological Testing

Over the past 30+ years, there have been many psychometrically sound measures developed to complement the clinical diagnosis of GD (for reviews, see Zucker, 2005; Zucker & Wood, 2011). These include parent-report questionnaires, self-report questionnaires (for adolescents), play assessments, structured tasks, projective tests, and gender identity interview schedules. Most of these measures show very good discriminant validity (with various comparisons groups as controls, such as siblings, clinically referred children, and nonclinically referred children), with very low rates of false-positives using sensitivity and specificity procedures. Moreover, within samples of gender-referred children, these measures have also reliably discriminated children threshold vs. subthreshold for the GD diagnosis. As noted in the section on Developmental Trajectories, some of these measures have also shown evidence of predictive validity.

Associated Features

Apart from the behavioral characteristics that define the GD diagnostic criteria, these children have other sex-dimorphic characteristics that

distinguish them from comparison children. For example, masked adult raters judged photographs of boys with GD to have a physical appearance that was more stereotypically feminine (e.g., “beautiful,” “pretty”) and less stereotypically masculine (e.g., “all-boy,” “rugged”) than same-sex controls, whereas the converse was found for girls with GD (e.g., less “beautiful,” “pretty,” but more “masculine,” “tomboyish”) (Fridell, Zucker, Bradley, & Maing, 1996; McDermid, Zucker, Bradley, & Maing, 1998; Zucker, Wild, Bradley, & Lowry, 1993). Other research showed that boys with GD were perceived by their parents as having been particularly “beautiful” and “feminine” during their infancy compared to control boys (Green, 1987). Boys with GD have a lower parent-rated activity level than same-sex controls, whereas girls with GD have a higher activity level than same-sex controls. Indeed, boys with GD have a lower activity level than girls with GD (Zucker & Bradley, 1995), the inverse from what is found in samples of boys and girls unselected for any other particular attribute of sex-typed behavior (Eaton & Enns, 1986).

General Behavior Problems

Since the last edition of this volume, a considerable amount of new data has accrued, which shows that, on average, both children and adolescents have more general behavior problems than their siblings and non-referred controls. Much of these data comes from analyses of the Child Behavior Checklist (CBCL), the Teacher’s Self-Report Form, and the Youth Self-Report Form, which are now part of a family of forms known as the Achenbach System of Empirically Based Assessment (ASEBA) (Achenbach & Rescorla, 2001). In general, children and adolescents with GD have behavior problems that approximate what is seen in other children and adolescents referred for other reasons although there is some variation depending on the metric, the age group (children vs. adolescents), and the clinic site (Cohen-Kettenis et al., 2003; de Vries, Doreleijers, Steensma, & Cohen-Kettenis, 2011; Steensma et al., 2013; Wallien, Swaab, & Cohen-Kettenis,

2007; Zucker & Bradley, 1995; Zucker, Wood, Singh, & Bradley, 2012; for a detailed review, see Zucker, Wood, & VanderLaan, 2014).

In recent years, there has also been an emerging interest in the possible co-occurrence of GD with autism spectrum disorders (ASD), as reviewed in de Vries, Noens, Cohen-Kettenis, van Berckelaer-Onnes, and Doreleijers (2010). A number of clinicians have reported on an apparent increase in the number of GD children and adolescents who appear to meet criteria for a high-functioning ASD, such as Asperger's Disorder or Pervasive Developmental Disorder Not Otherwise Specified. One explanation for a possible linkage between GD and ASD is the intense focus/obsessional interest in specific activities (e.g., Baron-Cohen & Wheelwright, 1999; Klin, Danovitch, Merz, & Volkmar, 2007). These children and adolescents appear to develop a fixation on gender, in much the same way that they develop other types of intense/obsessional/restricted interests (e.g., in street routes, in makes of dishwashers, etc.).

To address the idea of focused and obsessional interests, VanderLaan et al. (2014) examined two items from the CBCL: Item 9 ("Can't get his/her mind off certain thoughts; obsessions") and Item 66 ("Repeats certain acts over and over; compulsions") in a sample of 534 GD children (439 boys, 95 girls) and 419 siblings (241 boys, 178 girls), who ranged in age from 3 to 12 years. As for all CBCL items, ratings were on a 0–2-point scale. The mother–father correlation was 0.50 for Item 9 and 0.39 for Item 66.

Item 9 was endorsed more frequently for the GD children than for the siblings (for males, 61.5 % vs. 27.3 %; for females, 66.7 % vs. 15.4 %), as was Item 66 (for males, 26.2 % vs. 10.5 %; for females, 21.5 % vs. 5.1 %). For Item 9, the percentage was even higher than for referred children in the standardization sample (for males, 49 %; for females, 47 %) and considerably higher than for non-referred children (for males, 24 %; for females, 20 %). For Item 66, the percentage was comparable to the referred children in the standardization sample (for males, 26 %; for females, 24 %) and considerably higher than for non-referred children (for males, 5 %; for females, 6 %).

Thematic analysis for Item 9 indicated that gender-related content was significantly more common for the GD boys than for their male siblings (54.6 % vs. 13.0 %), but the difference between GD girls and their female siblings was not significant (40.9 % vs. 26.3 %). For Item 66, gender-related content was not more prevalent among the GD children than among their siblings.

In a second study, Wood (2011) administered the Social Responsiveness Scale (SRS) (Constantino & Gruber, 2005) to the mothers of 38 GD children. The SRS is a 65-item parent-report questionnaire, with response options ranging from 1 (not true) to 4 (almost always true). The SRS has five factors: Social Awareness, Social Cognition, Social Communication, Social Motivation, and Autistic Mannerisms. The last factor contains items that correspond to the construct of focused/intense interests (e.g., "Has an unusually narrow range of interests").

Wood (2011) found that 60.5 % of the sample had a *T* score ≥ 60 (indicating a clinical range score) on the Autistic Mannerisms factor. The corresponding percentages for the other factors were 39.5 %, 39.5 %, 47.4 %, and 44.7 %, respectively. For the total score, 55.3 % of the sample met criterion for caseness. Although these findings are suggestive of an elevation of ASD traits, much additional work is required; for example, it is not yet clear if these elevated traits of ASD in GD children will prove to be diagnostic specific—it is possible that they are characteristic of clinical populations in general (see, e.g., Pine, Guyer, Goldwin, Towbin, & Leibenluft, 2008).

From a conceptual perspective, the key issue is how to best account for the presence of associated behavior problems in both children and adolescents with GD: (1) Is it caused by an inherent stress or distress that co-occurs with GD? (2) Is it secondary to other forms of psychopathology, which, in turn, "cause" the GD to develop? (3) Is it caused by the social ostracism or rejection (e.g., from peers and parents) that can be elicited by the marked gender-variant behavior that expresses the underlying GD? (4) Is it unrelated to GD per se, but related to generic risk factors within the family for the expression of psychopathology (e.g., biological factors, parental psychopathology, familial adversity)?

To date, two lines of research have provided clear empirical support for two of these hypothesized pathways: the social ostracism model and the generic risk factor model. Several studies have shown that social ostracism by the peer group (which, most likely, results in poor peer relations) is a very strong predictor of general behavior problems in both GD children and adolescents. Other research has shown that composite measures of maternal psychopathology also predict general behavior problems (for review, see Zucker et al., 2014). Considerably less work has attempted to examine if self-reported stress or distress surrounding the GD can be linked to general measures of behavior problems and psychodynamic models which posit that other psychopathology induces the GD have not been formally tested by temporal methods (see Coates & Person, 1985).

Understanding the empirical evidence that supports or contests these different pathways is extremely important with regard to clinical management policies and decisions. For example, if the model of social ostracism is correct, one therapeutic approach would be to reduce the child's expression of gender-variant behavior. If these children became more gender typical, it would eliminate the surface behaviors that elicit the social ostracism. An alternative therapeutic approach would be to provide the child a safer social environment (e.g., attendance at schools in which gender nonconforming behavior is better tolerated, if not embraced, or to work with parents around "accepting" their child's gender-variant behavior). If the model of generic risk factors is correct, then the focus of treatment would be to alleviate, where possible, the activating effects of such factors (e.g., reduction of concurrent parental psychopathology, pharmacological treatment of the child when they have disorders that might be related to an underlying biological diathesis, etc.). If the association with an ASD is correct, then one therapeutic approach would be to help a child think more flexibly regarding gender, to move the child away from the intense/restricted focus on gender, etc. Finally, if GD is an inherent source of distress, then treatment designed to eliminate the GD

(whether by psychotherapeutic methods or biomedical treatments) should reduce the associated psychopathology.

Developmental Trajectories

When a child presents to a clinician with a behavior pattern that corresponds to the DSM-5 diagnosis of GD, many parents want information about long-term developmental trajectories. Will their child continue to feel gender dysphoric and, eventually, seek out biomedical treatment (hormonal treatment and genital reassignment surgery) and "formally" transition to living in the desired gender? Will their child's GD "desist" and thus become more comfortable with a gender identity that matches their birth sex? Regardless of their child's long-term gender identity, how will their sexual orientation differentiate? Will their child be sexually attracted to males, to females, to both, or to neither? In this section, I will provide a summary of the current database that has accumulated with regard to long-term developmental trajectories.

At the time of the 2000 volume, the most extensive long-term follow-up of boys with GD had been reported on by Green (1987) (for other follow-up studies available at that time, see the summary in Zucker & Bradley (1995), pp. 283–290). Green's study contained 66 feminine boys and 56 control boys assessed initially at a mean age of 7.1 years (range, 4–12). At the time of follow-up (M age, 18.9 years; range, 14–24), data were available for 44 of the feminine boys and 30 of the control boys. At follow-up, gender identity was assessed via a clinical interview, and sexual orientation was assessed by means of a semi-structured interview, in which Kinsey ratings, on a 7-point scale, were made for fantasy and behavior, ranging from exclusive heterosexuality (gynephilia) to exclusive homosexuality (androphilia) in relation to the participant's birth sex.

In Green's follow-up study, there was virtually no evidence for the persistence of GD: only 1 (2.2 %) of the 44 feminine boys was considered to be gender dysphoric at the time of follow-up.

Table 35.2 Summary of three new follow-up studies of children with gender dysphoria

Study	N/sex	Age at assessment (in years)		Age at follow-up (in years)		Gender dysphoric (%)	Bisexual/ homosexual in fantasy (%)	Bisexual/ homosexual in behavior (%)
		M	SD	M	SD			
Wallien and Cohen-Kettenis (2008)	59/M 18/F	8.3 8.6	2.0 1.5	19.4 18.7	3.4 2.7	20.3 50.0	81/68 ^a 70/100 ^a	79 ^b 60 ^b
Drummond et al. (2008)	25/F	8.8	3.1	23.2	5.8	12.0	32 ^c	24 ^c
Singh (2012)	139/M	7.4	2.6	20.5	5.2	12.2	63.6 ^d	47.2 ^d

Note: M=natal male; F=natal female

^aThe first value was based on a question pertaining to “fantasy” and the second value was based on a question pertaining to “attraction” (see the supplemental material for the article at <http://www.jaacap.com>). For the male participants, the *N* was 21 for fantasy and 37 for attraction; for the female participants, the *N* was 3 for fantasy and 10 for attraction

^bFor the male participants, *N*=19; for the female participants, *N*=5 (see Wallien & Cohen-Kettenis, 2008, Table 5)

^cFor fantasy, the denominator included 1 participant who did not report any sexual fantasies; for behavior, the denominator included 8 participants who had not engaged in sexual behavior (see Drummond et al., 2008, Table 3)

^dFor fantasy, *N*=129, including 4 participants who did not report any sexual fantasies; for behavior, *N*=108, including 28 participants who did not report any sexual behavior (see Singh, 2012, Tables 9 and 10)

The remainder appeared to be comfortable with a male gender identity. Regarding sexual orientation, 75–80 % of the feminine boys were classified as either bisexual or homosexual at follow-up compared to 0–4 % of the comparison boys in fantasy or behavior.

Three new follow-up studies now provide a basis for comparison to Green: Drummond, Bradley, Peterson-Badali, and Zucker (2008), Wallien and Cohen-Kettenis (2008), and Singh (2012). Two of these studies were from my own clinic, and the third study was conducted at the sole gender identity clinic for children in the Netherlands. Table 35.2 provides a summary of these three studies with regard to gender identity and sexual orientation at the time of follow-up.

From Table 35.2, it can be seen that the rate of persistent GD was higher in these three new follow-up studies, with a range of 12–50 %, when compared to Green’s persistence rate of 2.2 %. The most notable variation was between the two follow-up samples of girls (12 % vs. 50 %), but the sample sizes were sufficiently small that it would be imprudent to over-interpret the meaning of this variation. Regarding sexual orientation, for the males, a substantial majority were homosexual/bisexual (androphilic/biphilic) in fantasy and at least half were homosexual or bisexual in behavior. For the females, one-third

to one-quarter of the participants in Drummond et al. were homosexual or bisexual, which was notably lower than the percentage in Wallien and Cohen-Kettenis, but their study had only a maximum of 10 participants for these ratings.

From these new follow-up studies, I think that several provisional conclusions can be made: (1) with the exception of the female data from Wallien and Cohen-Kettenis, the percentage of children where the GD persists into late adolescence or early adulthood is on the low side. The persistence rate is certainly much lower than what one finds in GD patients who are evaluated for the first time in adolescence (not childhood) (for review, see Zucker et al., 2011). (2) For the male children, the new studies certainly confirm Green’s finding that marked feminine behaviors in boys are reliably associated with either a bisexual or a homosexual sexual orientation in adolescence/adulthood, at rates that are dramatically higher than the base rate of androphilia in males that one can discern from epidemiological studies (perhaps around 2–3 % using rigorous assessment methods and no more than 10 % using much looser metrics). In itself, this has important implications for theory regarding causal mechanisms that posit an intersection between gender identity and sexual orientation (see below). (3) For females, the

numbers for follow-up are still pitifully small, but even the percentage from the Drummond et al. (2008) study certainly suggests a much higher rate of a bisexual/homosexual sexual orientation than one would predict based on epidemiological research.

Predictors of Long-Term Gender Identity

When one asks adolescents or adults with GD about their recollections of sex-typed behavior in childhood, for those who have a sexual orientation directed to members of their birth sex, it is almost universal to find a childhood history of marked gender-variant or cross-gender behavior (Deogracias et al., 2007).² Thus, there appears to be evidence for retrospective continuity between an early cross-gender identification that persists into later phases of the life course. In contrast, the prospective data summarized above show much less continuity between cross-gender identification in childhood and at follow-up. A key challenge, then, for developmental theories of psychosexual differentiation is to account for the disjunction between retrospective and prospective data with regard to GD persistence.

Regarding children with GD, then, we need to understand why, for the majority, gender dysphoria appears to remit by adolescence, if not earlier. One possible explanation concerns referral bias. Green (1974) argued that children with GD who are referred for clinical assessment (and then, in some cases, therapy) may come from families in which there is more concern than is the case for adolescents and adults, the majority of whom did not receive a clinical evaluation and treatment

during childhood. Thus, a clinical evaluation and subsequent therapeutic intervention during childhood may alter the natural history of GD. Of course, this is only one account of the disjunction, and there may well be additional factors that might distinguish those children who are more likely to persist than those who do not.

One such explanation pertains to the concepts of developmental malleability and plasticity. It is possible, for example, that gender identity shows relative malleability during childhood, with a gradual narrowing of plasticity as the gendered sense of self consolidates as one approaches adolescence. As noted above, some support for this idea comes from follow-up studies of adolescents with GD, who appear to show a much higher rate of GD persistence as they are followed into young adulthood.

One contextual issue is that the vast majority of these samples entered these clinic-based prospective studies during historical periods when the predominant therapeutic guidelines were to somehow try and help a child feel more comfortable with a gender identity that matched his or her birth sex or to at least not “encourage” a cross-gender identity (Zucker et al., 2012). This has changed rather dramatically in the past few years. For example, there is now what I would call an early gender transition movement or subculture (see, e.g., <http://www.transkidspurplerainbow.org/>) in which some clinicians and some parents view a child’s early cross-gender identification as a fixed, unalterable, and essential part of the child’s sense of self. Accordingly, some clinicians recommend that a young child begin a social transition to the desired gender long before puberty—in some cases, as early as the preschool years (e.g., Brown, 2006; Byne et al., 2012; Padawar, 2012; Rosin, 2008; Saeger, 2006; Santiago, 2006; Schwartzapfel, 2013; Vanderburgh, 2009) and some parents implement this approach on their own.

In some respects, this approach to clinical management can be conceptualized as an alternative treatment to the more traditional “treatment-as-usual” (TAU) approaches which likely shared an underlying goal of reducing, not “supporting,” the child’s intense desire to be of the other gender.

²For GD adolescents and adults who have a sexual orientation predominantly directed to members of the opposite sex (relative to their own natal sex), it is much less common to recall a childhood history of cross-sex-typed behavior (Zucker et al., 2012). In these individuals, it is common for the GD to be overtly expressed only at the time of puberty or long after. In the literature, this is often referred to as “late-onset” GD. It is beyond the scope of this chapter to describe in detail this form of GD. A useful overview of late-onset GD in natal males can be found in Lawrence (2013).

One could even go so far as to posit that this contemporary approach is akin to a social experiment of nurture. Thus, it can be asked if the rate of persistent GD will be higher among those children who make an early social transition to the desired gender when compared to the TAU approaches.

Steensma, McGuire, Kreukels, Beekman, and Cohen-Kettenis (2013) have provided the first empirical evidence that this appears to be the case—at least for natal males. Steensma et al. followed up 127 children (79 natal boys, 48 natal girls) (M age at assessment, 9.1 years; range, 6–12) at a mean age of 16.1 years (range, 15–19). At the time of the childhood assessment, Steensma et al. classified 12 (15.1 %) of the natal boys and 27 (56.2 %) of the natal girls as having already made either a “partial” or a “complete” social transition to living in the cross-gender role. At follow-up, the participants were classified as either “persisters” or “desisters.” Of the 79 natal boys, 29 % were classified as persisters and, of the 48 natal girls, 50 % were classified as persisters. Of the 79 natal boys, a greater percentage of persisters had made a social transition in childhood compared to the desisters (43.4 % vs. 3.6 %); the corresponding figures for the girls were 58.4 % vs. 45.8 %, respectively. In logistic regression for natal males, early gender transition independently predicted persistence, but this was not the case for the natal females. At least for natal boys, then, it could be argued that the “act” of early gender social transition had some type of feedback effect in contributing to the persistence of GD. For natal girls, however, early gender social transition did not appear to have the same effect (see below). It is possible that the reason for the sex difference pertains to the complexity in defining what exactly constitutes a gender social transition. For many GD boys, they might well go to school wearing gender-typical clothing and thus are perceived to be boys, whereas many more GD girls, if they wear boy’s clothes and have very short haircuts, may well be perceived as boys; thus, at least in part, natal boys might have to do more to be classified as social transitioners than are natal girls. Indeed, in Steensma

et al., the percentage of natal boys classified as social transitioners was much lower than that of the natal girls (15.1 % vs. 52.0 %).

From the new follow-up studies, there was sufficient variability in gender identity outcome to analyze various predictors. In all three follow-up studies, dimensional measures of cross-gender identity and cross-gender role behavior in childhood predicted GD persistence. Children whose cross-gender identity and behavior were more extreme were more likely to be persisters than desisters. Thus, even within samples of children with marked gender-variant behavior, the extremeness of the phenotype could predict gender identity outcome. In Singh (2012), an older age at assessment in childhood marginally predicted persistence (at $p=0.09$), and a lower social class background significantly predicted persistence ($p<0.001$), independently of a dimensional composite of cross-gender behavior.

Why, one might ask, would a lower socioeconomic (SES) background predict persistence within a sample of GD children? An early study in the normative gender developmental literature reported that children from “working-class” backgrounds had an earlier awareness of “sex-appropriate” behavior than children from middle-class backgrounds (Rabban, 1950) and a subsequent study found that boys from lower SES backgrounds had more traditional patterns of sex-typed behavior than upper SES boys (Hall & Keith, 1964), but there was no significant social class effect for girls (for a similar null finding for girls, see Hines et al., 2002). Other studies hint at social class differences in parenting style that are related to gender socialization (greater egalitarianism in middle-class families) (Shinn & O’Brien, 2008).

In Singh (2012), it was speculated that the GD boys from lower SES families had more “rigid” notions of within-sex variation in sex-typed behavior and that, later on, the acceptability of a homosexual sexual orientation (without “becoming” a female to “normalize” such attractions) perhaps intensified the desire to be of the other gender. Thus, between-social class variation in the acceptability of homosexuality was posited as a potential mediator variable. On this point, there

is some interesting evidence to suggest that gay men from higher social class backgrounds are more likely to show behavioral defeminization over the life course than are gay men from lower social class backgrounds (Harry, 1985). It has been argued that, within gay male subculture, extreme effeminate behavior is appraised negatively. It is possible, therefore, that males with persistent cross-gender behaviors would be subject to rejection by potential sexual partners (see Taywadietop, 2001). Consistent rejections may predispose some of these individuals to consider transitioning to the female gender role as an alternative to living as a homosexual man.

Causal Mechanisms

In my view, understanding the genesis of GD requires that we understand the mechanisms that explain the development of normative sex differences in sex-dimorphic behavior (including gender identity, gender role, and sexual orientation). In this respect, I endorse the long-established tradition that emphasizes the importance of understanding the interplay between normative and atypical development and the idea that, in many instances, the underlying mechanisms regarding the latter are inversions of the underlying mechanisms of the former.

The field of psychosexual differentiation has relied on at least two theoretical models: one model asks what is known about the factors that contribute to normative between-sex differences in sex-dimorphic behavior (the between-sex model); the second model asks what is known about the factors that contribute to normative within-sex differences in sex-dimorphic behavior (the within-sex model).

As an example of the first model, it has long been theorized that the well-established between-sex difference in prenatal exposure to androgen accounts, at least in part, for normative sex differences in sex-dimorphic behavior (Berenbaum, Owen Blakemore, & Bletz, 2011; Hines, 2011). Let us suppose that it does. Then, one could ask if within-sex variation in prenatal androgen exposure would also account for within-sex variation

in sex-dimorphic behavior. Affirmative support for this question comes from numerous studies of genetic females with CAH, who are exposed to high levels of prenatal testosterone as a result of this endocrine abnormality and who also show, on a number of sex-dimorphic measures, masculinized (or defeminized) behavior (Hines, 2004). In unaffected boys and girls, Auyeung et al. (2009) showed that within-sex variation in fetal testosterone, as assayed from amniotic fluid, was related to within-sex variation in parent-reported sex-typed behavior at a mean age of 8.5 years: within-sex analyses showed that both boys and girls with higher levels of prenatal testosterone had more male-typical behavior (for a similar study that assayed testosterone in infancy, see Lamminmäki et al., 2012).

As an example of the second model, numerous studies have now documented that gay men come from sibships with an excess of older brothers when compared to heterosexual men (known as the fraternal birth order effect). In contrast, there is no evidence to indicate that there is an analogous effect associated with within-sex variation in sexual orientation among women. Thus, the fraternal birth order effect in males requires some kind of within-sex explanation. Blanchard (2001) and Blanchard and Klassen (1997) theorized that maternal immune reaction during pregnancy is one candidate explanation. Because the male fetus is experienced by the mother as more “foreign” (antigenic) than the female fetus, it was argued that the production of maternal antibodies has the (inadvertent) consequence of demasculinizing or feminizing the male fetus. Because the mother’s antigenicity increases with each successive male pregnancy, the model predicts that males born later in a sibline would be more affected and thus this is why the odds of male homosexuality increase with the number of older brothers. Bogaert (2006) provided some further support for this theory by showing that only biological older brothers, but not any other sibling characteristics, including nonbiological older brothers, predicted within-sex variation in sexual orientation in men.

In this section, I will provide a selective summary of “causal” research on GD that has, at

least in part, relied on these theoretical models (for a more detailed overview, see Zucker & Bradley, 1995).

Biological Influences

Genetics

Candidate gene studies have yielded mixed results in adult males and females with GD, including high rates of “false-positives” in control groups and failures to replicate (Ngun, Ghahramani, Sánchez, Bocklandt, & Vilain, 2011). Similar studies have not been conducted on either children or adolescents with GD. As this is a very new line of research, it is premature to draw any definitive conclusions. However, there is some supportive behavior genetic evidence: in clinical samples, identical twins are more likely to be concordant for GD than non-identical twins (Heylens et al., 2012; for a non-clinical sample, see Coolidge, Thede, & Young, 2002). Moreover, in the general population, twin studies have shown that the liability for cross-gender behavior has a strong heritable component (Alanko et al., 2010; Burri, Cherkas, Spector, & Rahman, 2011; van Beijsterveldt, Hudziak, & Boomsma, 2006). Other studies, however, have also identified strong shared and non-shared environmental influences (Iervolino, Hines, Golombok, Rust, & Plomin, 2005; Knafo, Iervolino, & Plomin, 2005). Such environmental influences could, of course, pertain to nongenetic biological factors but could also involve postnatal psychosocial factors. In any case, it should be recognized that these studies have not identified the specific genetic and environmental factors, or the gene \times environmental interactions, underlying the liability to cross-gender behavior. That genetic factors do not account for all of the variance in the liability to cross-gender behavior is demonstrated quite clearly from clinical case reports of identical twins discordant for GD (Heylens et al., 2012).

Prenatal Sex Hormones

It has long been noted that classical prenatal hormone theory does not easily account for GD since

the vast majority have a grossly normal somatic phenotype (e.g., normal external genitalia). Thus, there is little reason to believe that the prenatal hormonal milieu was grossly atypical. However, it is conceivable that more subtle variations in patterns of prenatal sex hormone secretion play a predisposing role. For example, in experimental studies of female rhesus monkey offspring, it has been possible, by varying the timing of exogenous administration of hormones during the pregnancy, to alter the normal patterning of sex-dimorphic behavior but to keep normal genital differentiation intact (Goy, Bercovitch, & McBair, 1988) (for an analogous model in male nonhuman primates, see Herman & Wallen, 2007). This animal model, which shows a dissociation between sex-dimorphic behavioral differentiation and genital differentiation, has the most direct relevance for explaining the marked cross-gender behavior of GD children and adolescents. The Auyeung et al. (2009) finding noted above suggests that subtle within-sex variation in prenatal testosterone might well apply to children with GD, but it would be difficult to test this possibility except by locating children who eventually developed a GD and who happened to be part of a sample in which prenatal testosterone had been assayed.

Because of this sampling obstacle, some studies have used biophysical markers that might be related, at least in theory, with variation in prenatal androgen exposure. An example of this is the measurement of the length of the second and fourth digits and their corresponding ratio (2D:4D). It is now well established that there is a normative sex difference in 2D:4D, with males having, on average, a longer fourth digit than second digit than females (for a meta-analytic summary, see Grimbos, Dawood, Burris, Zucker, & Puts, 2010). Although some studies on GD adults have shown evidence for an altered within-sex difference in 2D:4D, the one study on 2D:4D in children with GD did not detect any significant difference from same-sex controls (Wallien, Zucker, Steensma, & Cohen-Kettenis, 2008).

Fraternal Birth Order Effect

As noted above, a fraternal birth order effect has been established as a correlate of within-sex

variation in sexual orientation. The fraternal birth order effect has also been documented in several independent samples of boys with GD (assessed either in childhood or in adolescence) (Blanchard, Zucker, Bradley, & Hume, 1995; Schagen, Delemarre-van de Waal, Blanchard, & Cohen-Kettenis, 2012; VanderLaan, Blanchard, Wood, & Zucker, *in press*; Zucker et al., 1997b). If the maternal immune hypothesis is correct, it could be the case that the demasculinizing or feminizing effect also extends to gender identity, which, of course, in GD males is shifted in a female-typical direction.

Psychosocial Influences

To merit truly causal status, psychosocial factors should be able to account for the emergence of marked cross-gender behavior in GD children in the first few years of life, when its behavioral expressions are first manifested. Otherwise, psychosocial factors would be better conceptualized as having a perpetuating role.

Maternal Prenatal Sex Preference

One early hypothesis was rather simple: mothers of boys with GD were more likely to have desired a daughter during the pregnancy than control mothers. This prenatal gender preference was hypothesized to have influenced the mother's subsequent gender socialization of the GD boy (e.g., by subtly encouraging or fostering feminine behavior). Zucker et al. (1994), however, found no evidence that mothers of GD boys were more likely to recall a prenatal preference for a daughter than mothers of same-sex controls. However, Zucker et al. did find that mothers of GD boys who only had older sons were more likely to have wanted a daughter during the pregnancy than mothers of GD boys from other classes of sibships; however, the same pattern was detected in the mothers of control boys. Thus, there was no support for the hypothesis.

Social Reinforcement

Parental tolerance or encouragement of the early cross-gender behavior of GD children has been

reported on by clinicians of diverse theoretical persuasions and has also marshaled some degree of empirical support (Green, 1987; Zucker & Bradley, 1995).

The reasons why parents might tolerate, if not encourage, early cross-gender behaviors appear to be quite diverse, suggesting that the antecedents to this "end state" are multiple in origin. For example, if one listens to the reports by contemporary parents of children who have made an early gender social transition, a common narrative is that the parents are simply "supporting" what they view as their child's essential "nature" (cf. Smiler & Gelman, 2008). Such parents would argue that the direction of effect is from child to parent, not the other way around or even some kind of interactive, iterative transactional process (for an important study implicating transactional processes in the sex-typed play behavior of girls with CAH, see Wong, Pasterski, Hindmarsh, Geffner, & Hines, 2013).

In an earlier generation of parents of GD children, parents reported being influenced by ideas regarding nonsexist child-rearing and thus were as likely to encourage cross-gender behavior as same-gender behavior. In other parents, the antecedents seem to be rooted in pervasive conflict that revolved around gender issues. For example, I coined the term *pathological gender mourning* to describe a small subgroup of mothers who had a strong desire for a girl (after having giving birth only to older sons), and they seemed quite troubled by the fact that they had given birth to another son (Zucker, 1996). This was expressed in various ways: marked jealousy of friends with daughters, assignment of a gender-ambiguous or gender-neutral given name, delayed naming of the newborn, severe postpartum depression, replacement and adoption fantasies, recurrent night dreams about being pregnant with a girl, and active cross-dressing of the boy during infancy and toddlerhood.

In the normative developmental literature, the role of parental reinforcement efforts in inducing sex-typed behavioral sex differences was studied extensively between the 1970s and early 1990s. Lytton and Romney's (1991) meta-analysis concluded that, with one exception, there was "little

differential socialization for social behavior or abilities” (p. 267). The exception was in the domain of “encouragement of sex-typed activities and perceptions of sex-stereotyped characteristics” (p. 283), for which the mean effect sizes for mothers, fathers, and parents combined were 0.34, 0.49, and 0.43, respectively. Although Lytton and Romney’s overall conclusion minimized the influence of parental socialization on sex-dimorphic behavior, the domain for which clear parental gender socialization effects were found is precisely the domain that encompasses many of the initial behavioral features of GD (for further discussion, see Zucker & Bradley, 1995, pp. 222–226).

Cognitive-Developmental Factors

Over the past couple of decades, cognitive-developmental models have come to play a much more central role in the normative literature regarding gender development (see, e.g., Martin et al., 2002; Tobin et al., 2010), building on the seminal theoretical work from the 1960s to 1980s, and its emphasis on “self-socialization.” Two elements of this complex work will be discussed here. First, there is the literature on how early gender self-labeling as a boy or as a girl organizes the child’s search for gender-related information in the social environment. Several empirical studies have shown that sex-typed behavior increases following the toddler’s or young child’s ability to self-label correctly as a boy or as a girl, an early phase in the development of mature cognitive gender constancy.

Studies of children with GD have shown that they are more likely than control children to mislabel themselves as of the other gender and to also show a “developmental lag” in cognitive gender constancy (e.g., Wallien et al., 2009; Zucker et al., 1999). Perhaps this early cognitive mislabeling of gender contributes to their cross-gender identification although the reasons why such mislabeling occurs are unclear. It could, for example, be argued that there is some kind of interactive effect between gender cognitions and the strong interest in cross-gender behavior.

A second aspect of the cognitive-developmental literature pertains to the observation that young children have rather rigid, if not

obsessional, interests in engaging in sex-typed behavior: for girls, Halim et al. (2013) dubbed this the “pink frilly dress” phenomenon. Halim et al. argued that this gender rigidity was part of the young child’s effort to master gender categories and to securely (affectively) place oneself in the “right” category. Parents of such children do not particularly encourage the rigidity, but they also do not discourage it, and there is the assumption that such rigidity will wane over developmental time and that there will be a concomitant increase in gender flexibility.

Halim et al.’s (2013) observations jibe rather nicely with empirical data suggesting that many children with GD show very focused and intense cross-gender interests (VanderLaan et al., 2014). If these early cross-gender intense interests are reinforced rather than ignored or compensated for by efforts to increase gender-flexible thinking and behavior, perhaps this contributes to their continuation and an increase in the likelihood that a cross-gender identity will persist.

Clinical Management: Is There a Best Practice?

For the practicing developmental clinician, it will be readily apparent from a perusal of the treatment guideline literature that there are some therapeutic approaches for which there is reasonable consensus—especially for adolescents—but for other approaches much is “up in the air,” especially for children.

For probably the majority of adolescents with GD, there is now a reasonable consensus that psychological interventions designed to reduce the gender dysphoria are relatively ineffective and most adolescents with GD are not “interested” in such an approach anyways. Because the desire to be of the other gender has, more or less, become part of the youth’s gendered sense of self, the most common therapeutic approach has been to support a social gender transition (if it has not already occurred) and to support the initiation of biomedical treatments that permit an approximation of the phenotype of the desired gender. Thus, in adolescents, it has become a more standard practice to recommend the institution of

hormonal treatment to delay or suppress somatic puberty via the use of gonadotropin-releasing hormone analogues prior to the age of 16 years, followed by the institution of contra-sex hormonal therapy at 16+ years, and then sex-reassignment surgery at 18+ years. For carefully evaluated adolescents, this therapeutic approach reduces the GD and appears to contribute to better psychosocial functioning in general (see, e.g., Cohen-Kettenis, Steensma, & de Vries, 2011; Coleman et al., 2011). It should, however, also be recognized that not all adolescents with GD are immediate candidates for this treatment approach: there are some adolescents who report being “confused” about their gender identity, some wonder if their gender dysphoria is related to adverse psychosocial experiences, and others are in a phase of exploring how their felt gender identity relates to their emerging sexual orientation. For these adolescents, it is more appropriate to begin treatment with a trial of psychosocial therapy to help them sort out these issues, prior to consideration of the utility of biomedical treatments (Smith, van Goozen, & Cohen-Kettenis, 2001; Zucker et al., 2011).

For children, the contemporary therapeutic literature is hampered by the relative, if not complete, absence of well-designed comparative treatment approaches (Zucker, 2008). Therapeutic goals need to be clearly articulated and agreed upon in a collaborative manner with parents. The clinician needs to be well versed in the conceptual and philosophical discourse about what constitutes “best practice” in order to contextualize the therapeutic needs of individual children (Drescher & Byne, 2012). The clinician will also need to be quite mindful of the different philosophies, values, and “ideologies” that parents bring to the consulting room. Some parents very much want their child to feel comfortable with a gender identity that matches their birth sex, others are more comfortable with their child expressing a cross-gender identity, and still others simply don’t know what to think and, therefore, look to the clinician for expert guidance.

My own view is that, for young children with GD, gender identity differentiation is far from fixed, as suggested by the long-term follow-up data reviewed above. Thus, a therapeutic approach

that attempts to reduce the GD via psychosocial treatments is likely to be successful.

If this conjecture is correct, then the clinician must contemplate a myriad of value judgments, such as whether or not it is easier for the child to grow up with a gender identity that matches his or her birth sex vs. a gender identity that is incongruent with the birth sex, and does the former result in a better life-course psychosocial adaptation? On this point, much remains unknown.

We are currently in an era in which some parents and some clinicians have adopted a very different course of therapeutics, as I outlined earlier in describing the early gender transition social movement. It is my own view that this therapeutic approach will result in a much higher rate of children persisting in their desire to change genders and to pursue the biomedical treatments that become available at the time of adolescence. As more data become available that track the psychosocial adjustment of these youngsters, we will be in a better empirical position to draw conclusions about best practice. For the time being, the contemporary developmental clinician will have to tolerate the ambiguity of the gaps in the literature on what is not known.

Summary

In this chapter, I have reviewed aspects of the core phenomenology, diagnosis and assessment, associated features, developmental trajectories, and selected causal mechanisms pertaining to GD in children and adolescents. Given the recent increase in clinical referrals of children and adolescents in the GD spectrum that has been reported internationally, it is important that practitioners be aware of the various methods that are available for a comprehensive diagnostic assessment, to have information on the common associated problems seen in this population, and to be aware of the follow-up data on known developmental trajectories. Much empirical work remains to be done in identifying what is clearly a complex biopsychosocial pathway that leads to this relatively uncommon, but fascinating, psychiatric condition.

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