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Psychosocial and Psychological Vulnerability in Adolescents with Gender Dysphoria: A “Proof of Principle” Study

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For adolescents with gender dysphoria, it has become common to be offered hormonal treatment to either delay or suppress pubertal development and/or to masculinize or feminize the body. At the same time, it has been our clinical impression that the psychological vulnerability of at least some of these youth has been overlooked. Fifty consecutive referrals of adolescents with a *DSM-IV-TR* diagnosis of gender identity disorder (GID) constituted the sample. Information obtained at intake was coded for the presence or absence of 15 psychosocial and psychological vulnerability factors. The mean number of psychosocial/psychological vulnerability factors coded as present was 5.56 (range, 0–13). Over half of the sample had six or more of the vulnerability factors. The number of factors coded as present was significantly correlated with behavioral and emotional problems on the Youth Self-Report Form

and the Child Behavior Checklist, but not with demographic variables or IQ. The findings supported the clinical impression that a large percentage of adolescents referred for gender dysphoria have a substantial co-occurring history of psychosocial and psychological vulnerability, thus supporting a “proof of principle” for the importance of a comprehensive psychologic/psychiatric assessment that goes beyond an evaluation of gender dysphoria *per se*.

INTRODUCTION

Over the past 10 years or so, clinicians who work with gender-dysphoric youth in specialized gender identity clinics have reported a substantial increase in referrals (Aitken et al., 2015; Chen, Fuqua, & Eugster, 2016; Wood et al., 2013; Zucker, Bradley, Owen-Anderson, Kibblewhite, & Cantor, 2008). There are several reasons that might account for this: (a) the use of the Internet for seeking out information regarding mental health services for gender identity issues, including various websites that provide information about gender dysphoria; (b) the increased visibility of transgender people in print media, television, film, and other outlets; and (c) gradual destigmatization of transgenderism, leading, perhaps, to a greater openness to seek out mental health care. It has been our clinical experience that many gender-dysphoric youth will comment that they did not have a word to describe how they felt until they began searching the Internet, saw the topic discussed on television, or received information during a health class at school. Thus, for some youth, transgenderism/transsexualism/trans*/gender dysphoria appear to have become much more accessible labels or terms that match felt experience.

Over this same time period, many youth and their families have learned about the availability of biomedical treatments designed to reduce gender-dysphoric feelings, particularly the use of hormonal therapy to delay or suppress somatic puberty. This form of treatment has received a good deal of media attention; information is widely available on the Internet, and its use has been described or evaluated empirically in several studies (e.g., Cohen-Kettenis, Delemarre-van de Waal, & Gooren, 2008; Cohen-Kettenis, Steensma, & de Vries, 2011; Costa et al., 2015; de Vries et al., 2014; de Vries, Steensma, Doreleijers, & Cohen-Kettenis, 2011; Smith, van Goozen, & Cohen-Kettenis, 2001; Zucker et al., 2011).

The Standards of Care for the Health of Transsexual, Transgender, and Gender-Nonconforming People, Version 7 (Coleman et al., 2011) recommends the importance of a mental health assessment that can inform the clinical management of adolescents diagnosed with gender dysphoria. In the context of increased referral rates and the implementation of biomedical treatments, particularly hormonal suppression, it has been our observation that other mental health issues that some gender-dysphoric youth experience have received less attention by mental-health care providers, which, perhaps, has had the unintended consequence of ignoring the evidence that this is a psychologically vulnerable population (for review of the evidence for this psychological vulnerability, see Leibowitz & de Vries, 2016; Leibowitz & Spack, 2011; Stoddard, Leibowitz, Ton, & Snowdon, 2011). Gender dysphoria in itself can be a source of severe distress, with the increased salience of the incongruence between one’s felt gender identity and somatic sex intensifying during the onset of puberty. There are, of course, a range of other factors that may contribute to this psychological vulnerability/distress, including peer social ostracism,

family rejection, generic risk factors for psychopathology (e.g., a family history of psychopathology), cultural factors, and religious factors.

One of the more widely studied set of variables that marks this psychological vulnerability is a history of self-harm, suicidal ideation, and suicide attempts. For example, across several studies of clinic-referred adolescents with gender dysphoria (sample size range, 34–177), the prevalence was 28.8–41.0% for self-harm, 17.5–42.2% for suicidal ideation, and 11.9–15.8% for suicide attempts (Becker, Gjergii-Lama, Romer, & Möller, 2014; Holt, Skagerberg, & Dunsford, 2016; Khatchadourian, Amed, & Metzger, 2014; Skagerberg, Parkinson, & Carmichael, 2013). One study ($n = 47$) reported a rate of 53% for “suicidal and self-harming [behaviors]” combined (Kaltiala-Heino, Sumia, Työlajärvi, & Lindberg, 2015). The time frame for these percentages was not particularly clear, but one other study reported a lifetime prevalence of 51% for suicidal ideation ($n = 49$) and 30.0% for suicide attempts ($n = 29$) (Olson, Schragar, Belzer, Simons, & Clark, 2015). Comparable figures have been reported for adults with gender dysphoria (for review, see Marshall, Claes, Bouman, Witcomb, & Arcelus, 2016; Zucker, Lawrence, & Kreukels, 2016).

The purpose of the present study was to identify the extent of psychosocial and psychological vulnerability in a clinic-referred population of adolescents diagnosed with gender dysphoria. To do so, we reviewed, at intake, the medical charts of 50 adolescents referred consecutively to our clinic and coded for the presence of 15 variables that we thought, on clinical grounds, would reasonably represent the extent of this vulnerability. If our quantitative review of medical chart data was supportive of our clinical impression of marked vulnerability in at least some youth, it would provide a “proof of principle” (Schmidt, 2006) evidence base for clinical management that goes beyond the assessment and treatment of gender dysphoria per se.

METHOD

Participants

We reviewed the case files of 50 consecutive referrals of adolescents with a *DSM-IV-TR* diagnosis of gender identity disorder (GID; American Psychiatric Association, 2000) to a specialized gender identity service housed within a child and youth mental health program at an academic health science center. The sample consisted of 17 natal males and 33 natal females (median age, 16.9 years; range, 13–20) assessed between February 2011 and June 2012. The skew in favor of natal females represents a shift in the sex ratio from prior years, which either favored natal males or was close to parity (Aitken et al., 2015). At the time of the baseline assessment, none of the clients were receiving any biomedical treatment, that is, puberty blockers or hormone therapy to feminize or masculinize the body. On average, the clients had a full-scale IQ of 108.1 (range, 64–143). On the Hollingshead (1975) Four-Factor Index of Social Status (parental education and occupation; absolute range, 8–66), the mean was 39.28 ($SD = 14.35$) (46% of the families were classified as I–II, 26% as III, and 28% as IV–V where I = *major business and professional* to V = *unskilled laborers, menial service workers*). Less than half (44%) had biological parents (or adoptive parents from birth) who were married or in a common-law relationship at the time of assessment. Regarding ethnicity, 74% were Caucasian and 26% were visible minorities. We classified clients’ sexual orientation as either homosexual (androphilic for those with a birth-assigned sex as male, gynephilic for those with a birth-assigned sex as female) or nonhomosexual

(gynephilic, biphilic, or asexual for those with a birth assigned sex as male; androphilic, biphilic, or asexual for those with a birth-assigned sex as female) using the Erotic Response and Sexual Orientation Scale (Storms, 1980), a 16-item quantitative metric of heteroerotic and homoerotic sexual orientation in fantasy (for details, see Zucker et al., 2012). The percentage of patients classified as homosexual (in relation to the sex assigned at birth) was 64% and the percentage classified as nonhomosexual was 36%.

Measures and Procedure

Once a referral was made, we conducted an intake telephone interview with a parent, the youth (or both) or another person responsible for the care of the adolescent (e.g., a child protection worker). At the time of intake and prior to the clinical assessment, background reports (if there were any) were obtained and reviewed. From the intake telephone interview and these other sources of information, we coded as present or absent 15 variables: (1) a prior outpatient assessment (unrelated to gender identity issues per se); (2) a prior trial of outpatient therapy (unrelated to gender identity issues per se); (3) psychiatric day treatment; (4) a prior inpatient admission; (5) a prior (or current) trial of psychopharmacologic medication; (6) having dropped out of high school; (7) an individualized educational plan for school-related problems; (8) suicidal ideation; (9) self-harm behavior; (10) suicide attempt(s); (11) a history of physical abuse; (12) a history of sexual abuse; (13) family involvement with a child protection agency; (14) placement in residential treatment and/or homelessness; and (15) a prior *DSM* diagnosis (not including GID). Cronbach's alpha for the 15 variables was .81.

As a test of the validity of these risk factors, we correlated the total number with the sum score of behavioral and emotional problems self-reported on the Youth Self-Report Form (YSR) (Achenbach & Edelbrock, 1986) and by the mother (or the father or another adult involved in the youth's life if maternal ratings were not available) on the Child Behavior Checklist (CBCL) (Achenbach & Edelbrock, 1983) at the time of the formal clinical assessment.

This chart study received approval from the Research Ethics Board (REB) at the Centre for Addiction and Mental Health. All analyses were conducted on anonymized data for which identifiers were stored in accordance with REB guidelines.

RESULTS

Table 1 shows the percentage of youth for whom each of the 15 psychosocial or psychological vulnerability factors was coded as present. The mean number of variables coded as present was 5.56 ($SD = 3.36$, mode = 8, median = 6, range, 0–13). Fifty-four percent of the sample had six or more (i.e., greater than the mean) of the vulnerability factors. From Table 1, it can be seen that 80% had a prior outpatient assessment for reasons other than GID per se. A total of 78% had a prior trial of outpatient therapy, over 20% had an inpatient psychiatric admission, and over half had a prior or current trial of psychopharmacologic treatment. Sixty percent had a prior *DSM* diagnosis other than GID (see Table 2). Of the 30 clients with a prior *DSM* diagnosis, 11 (37%) had one, 14 (47%) had two, and 5 (17%) had three or more. The most common diagnosis was a mood disorder. Over half had a history of suicidal ideation, and one quarter had at least one suicide

TABLE 1
Number and Percentage of Adolescents Coded as Present for Each Psychosocial or Psychological
Vulnerability Factor (Total $N = 50$)

<i>Variable</i>	<i>Number of Cases</i>	<i>%</i>
Prior outpatient assessment	40	80
Prior trial of outpatient therapy	39	78
Psychiatric day treatment	2	4
Inpatient admission	11	22
Prior or current trial of psychopharmacologic medication	27	54
Dropped out of high school	17	34
Individualized education plan	14	28
Suicidal ideation	31	62
Self-harm	18	36
Suicide attempt(s)	13	26
History of physical abuse	10	20
History of sexual abuse	5	10
Involvement of Children's Aid Society	12	24
Residential treatment or homelessness	8	16
<i>DSM-IV-TR</i> diagnosis/diagnoses	30	60

attempt. One third of the sample had dropped out of high school. The number of vulnerability factors was not significantly correlated with natal sex (dummy coded as 1 = natal female; 2 = natal male), age at assessment, IQ, ethnicity (1 = Caucasian; 2 = visible minority), parent's social class and marital status (1 = two-parent; 2 = other), or sexual orientation (1 = nonhomosexual, 2 = homosexual) (r s ranged from $-.03$ – $.23$).

On the YSR, 60% of the youth ($n = 50$) had a sum score that fell in the clinical range (> 90 th percentile) and, on the CBCL ($n = 45$), 69% had a sum score in the clinical range. The total number of vulnerability factors was significantly correlated with the sum of behavioral and emotional problems on both the YSR, $r = .40$, $p = .004$, and the CBCL, $r = .63$, $p < .001$ (with the two YSR/CBCL suicidality items removed to avoid confounding with two of the risk factors).

To illustrate our clinical experience with potentially inadequate mental health assessments, we provide the following two examples:

Case Example 1

Hillary was a 17-year-old birth-assigned female, living with her upper-middle-class parents. She has an older sister, who does not live at home. A prior psychoeducational assessment indicated an IQ above the 99th percentile.

During an intake telephone interview with the mother, Hillary was reported to have an acute onset of gender dysphoria: "[It] literally happened overnight." There was no developmental history of cross-gender identification that would be consistent with a diagnosis of GID. The mother noted that Hillary had had a long-standing history of social-relational difficulties, particularly with girls, which the mother attributed, in part, to her gifted IQ. The mother wondered if Hillary suffered from body dysmorphic disorder (BDD) and "other mental health conditions," such as anxiety and

TABLE 2
DSM-IV-TR Diagnoses

<i>ID</i>	<i>Natal Sex</i>	<i>Diagnoses</i>
1	F	None
2	M	Attention-Deficit/Hyperactivity Disorder; Posttraumatic Stress Disorder
3	F	None
4	F	Major Depressive Disorder
5	M	None
6	F	None
7	F	None
8	F	None
9	M	Anorexia Nervosa; Generalized Anxiety Disorder; Major Depressive Disorder; Obsessive-Compulsive Disorder; Learning Disorder
10	F	None
11	F	None
12	F	Learning Disorder
13	F	None
14	F	Eating Disorder Not Otherwise Specified; query Major Depressive Disorder; query Generalized Anxiety Disorder
15	M	Major Depressive Disorder
16	F	None
17	M	Generalized Anxiety Disorder; Major Depressive Disorder
18	F	None
19	M	Attention-Deficit/Hyperactivity Disorder; Generalized Anxiety Disorder; Major Depressive Disorder
20	F	None
21	M	Attention-Deficit/Hyperactivity Disorder; Major Depressive Disorder
22	F	Major Depressive Disorder
23	F	None
24	F	Learning Disorder; Pervasive Developmental Disorder Not Otherwise Specified
25	F	Eating Disorder Not Otherwise Specified; Generalized Anxiety Disorder; Major Depressive Disorder
26	M	Asperger's Disorder; Attention-Deficit/Hyperactivity Disorder; Major Depressive Disorder; Tourette's Disorder
27	M	Obsessive-Compulsive Disorder; Tourette's Disorder
28	F	Dysthymic Disorder
29	F	Major Depressive Disorder
30	M	Attention-Deficit/Hyperactivity Disorder; Learning Disorder
31	M	Attention-Deficit/Hyperactivity Disorder; Learning Disorder
32	M	Attention-Deficit/Hyperactivity Disorder; Generalized Anxiety Disorder
33	F	Attention-Deficit/Hyperactivity Disorder; Major Depressive Disorder
34	F	Generalized Anxiety Disorder; Major Depressive Disorder
35	F	Major Depressive Disorder
36	M	Major Depressive Disorder (Single Episode)
37	M	None
38	F	None
39	F	None
40	F	Asperger's Disorder; Generalized Anxiety Disorder
41	M	None

(Continued on next page)

TABLE 2
(Continued)

ID	Natal Sex	Diagnoses
42	F	Anxiety Disorder Not Otherwise Specified; Identity Problem; Major Depressive Disorder (Recurrent); Oppositional Defiant Disorder; Schizophrenia; Social Phobia (Social Anxiety Disorder)
43	F	Generalized Anxiety Disorder; Panic Disorder Without Agoraphobia
44	M	None
45	F	Major Depressive Disorder (Single Episode)
46	M	Major Depressive Disorder
47	F	None
48	F	Attention-Deficit/Hyperactivity Disorder; Learning Disorder
49	F	None
50	F	Major Depressive Disorder; Social Phobia (Social Anxiety Disorder)

Note. F = female; M = male. For clients with more than one *DSM-IV-TR* diagnosis, it should be noted that they could be concurrent (i.e., made at the same point in time) or consecutive (i.e., made at different points in time).

depression. Regarding the BDD, the mother noted that, for the past few years, Hillary had been extremely preoccupied with her physical appearance, literally taking hundreds of “selfies” each day, trying to look just right. If she did not look right, she would refuse to leave the house. Mother noted that Hillary’s phenotypic social appearance had been very “feminine” throughout this time period. Hillary’s mother hypothesized that the gender dysphoria was a response to a recent relationship with a psychologically troubled boyfriend, who was gay. The mother wondered if Hillary developed the belief that the only way to retain this relationship was to become a boy herself.

Hillary’s mother reported that both she and her husband were both very liberal and progressive with regard to social issues. Hillary was, therefore, surprised that her parents did not, without question, accept her disclosure that she was a trans boy. She became very angry with them and, when they tried to explore matters with her, she would run away from home for several days.

A primary concern of the parents was that Hillary had sought out a physician in the community who was well known for working with the transgender population and, after a brief assessment and without any input from the parents, had already prescribed testosterone. They were concerned that the physician was not aware of Hillary’s history of social difficulties, that she had had a long history of physical appearance concerns, and that the gender dysphoria was clearly of a late-onset form, perhaps related to the romantic relationship with the boyfriend. Because this physician refused to meet with the parents, a second opinion was sought.

Case Example 2

Heather was an almost 16-year-old birth-assigned female, living with her middle-class parents and a younger sibling. A prior psychoeducational assessment indicated an above-average IQ.

Over the past couple of years, Heather had been seeing a mental health counselor for anxiety and depression. About 18 months prior, Heather disclosed to her parents that she was “transgender,” reminding her parents that in the sixth grade she had disclosed to them that she felt like a boy. At that time, Heather’s mother did not seem to really grasp what she was saying and ignored it. When she disclosed these feelings again, the parents took her more seriously and sought out

the advice of a physician who worked with transgender youth. The recommendation was to begin a trial of hormonal suppression with Lupron.

The parents did not necessarily disagree with this recommendation; however, they were worried that Heather had not told the attending clinicians the “whole story,” including her marked anxiety about her school performance, her labile mood, her history of social-relational problems with girls, and her extreme anxiety about sexuality (indeed, Heather reported a sense of disgust at girls who dressed in a sexually provocative manner). Heather (now Harvey) indicated that he had no interest or desire for sexual/romantic relationships, although he self-identified as “gay” (i.e., an androphilic sexual orientation in relation to the female sex assignment at birth). When asked if they were able to share these concerns with the mental health clinician who saw Harvey for the gender dysphoria, the parents indicated that the assessment focused solely on the gender dysphoria and that there was “no time” to discuss the other issues. Several months after starting the hormonal treatment, Harvey made a relatively serious suicide attempt, ingesting a large number of aspirin, hoping to die, which required a brief hospitalization in a psychiatric in-patient unit for stabilization. The parents sought out a second opinion to understand better Harvey’s general mental health.

DISCUSSION

This quantitative chart review study appears to confirm our clinical impression that a large percentage of adolescents referred for gender dysphoria have a substantial co-occurring history of psychosocial and psychological vulnerability. Our findings appear to be consistent with prior studies in which the focus was on a smaller number of variables, such as a history of self-harm, suicidal ideation, or suicide attempts (as summarized in the Introduction). Regarding the presence of a *DSM-IV-TR* diagnosis, Khatchadourian et al. (2014) reported that 26% of their clients had two or more diagnoses, somewhat lower than our finding of 38%. Using a structured diagnostic interview schedule administered to parents, de Vries, Doreleijers, Steensma, and Cohen-Kettenis (2011) reported that 15% of their adolescent clients met criteria for two or more diagnoses, but this was limited only to the past 12 months. Chen et al. (2016) reported that 37% of their clients had a history of psychopharmacologic treatment compared to 54% in our sample. By examining a broader range of psychosocial and psychologic vulnerability factors, our data appear to demonstrate a “proof of principle” that supports the importance of a comprehensive psychologic/psychiatric assessment that goes beyond an evaluation of gender dysphoria per se (Adelson & American Academy of Child and Adolescent Psychiatry [AACAP] Committee on Quality Issues (CQI), 2012; Byne et al., 2012; Olson-Kennedy et al., 2016).

A key issue, of course, is how best to understand the presence of these various vulnerability factors among gender-dysphoric youth. For example, to what extent was their presence a consequence of the gender dysphoria itself (e.g., the high percentage of suicidal ideation), a consequence of social stigma, as theorized by the gender minority stress model (Reisner, Greytak, Parsons, & Ybarra, 2015), or due to more generic factors, such as a family history of psychopathology, that are not necessarily related to the gender dysphoria? Over half of the sample had a current or prior history of psychopharmacologic treatment, most likely targeted at other *DSM* diagnoses (e.g., a mood disorder, an anxiety disorder, attention-deficit/hyperactivity disorder, etc.). On this point, it is clear that the answers can only be formulated within the context of a comprehensive clinical assessment. If the vulnerability factors (e.g., suicidality, depression) are primarily

“secondary” to the gender dysphoria or a consequence of social ostracism, it is likely that they will improve once the youth begins biomedical treatment and receives psychosocial supportive therapy (Cohen-Kettenis et al., 2011; Costa et al., 2015). However, if the vulnerability is the result of other factors, such as a biologic predisposition to a mood or anxiety disorder or complex family dynamics that contribute, for example, to a personality disorder *in statu nascendi*, it is likely that a broader treatment plan will be required. It is also important to consider the presence of these vulnerability factors in terms of the youth’s “readiness” to commence with biomedical treatments or if a period of psychotherapeutic exploration is more appropriate (Cohen-Kettenis et al., 2011; Smith et al., 2001; Zucker et al., 2011).

There are several methodological and interpretive issues to consider. First, it is likely that we underestimated the extent of this psychological vulnerability because we relied solely on information provided to us during the intake interview and background reports when such reports were available. It is probably the case that additional information obtained during the formal clinical assessment would have revealed the presence of factors that we coded as not present during the less structured intake interview. Second, it is not known if our findings will generalize to other settings in which adolescents are seen for gender dysphoria (e.g., by private practice clinicians or in mental health settings that do not specialize in gender dysphoria). It would, of course, also be important to see to what extent other clinics that specialize in gender dysphoria see youth who appear to be psychologically vulnerable; on this point, there are some studies in the literature that have identified both similarities and differences in cross-clinic analyses using standardized measures of behavioral and emotional problems (de Vries, Steensma, Cohen-Kettenis, VanderLaan, & Zucker, 2016; Steensma et al., 2014). Third, because we did not have a clinical control group of adolescents, we cannot say if the number of vulnerability factors identified would be more than, similar to, or less than the number of such factors found in youth referred for other clinical reasons to an academic health science center. Lastly, it should be recognized that this study did not examine the presence of potential protective factors, such as social support both within and outside the family, which are of obvious importance with regard to how youth cope with the experience of gender dysphoria in particular and facilitate psychosocial adaptation in general (Simons, Schrager, Clark, Belzer, & Olson, 2013). In sum, in our sample, apart from their gender dysphoria, a large percentage of the youth had a co-occurring psychosocial and psychiatric history suggestive of a wide range of difficulties. For these youth, these issues need to be addressed as part of a comprehensive plan of clinical care.

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