



Removing transgender identity from the classification of mental disorders: a Mexican field study for ICD-11

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Summary

Background The conceptualisation of transgender identity as a mental disorder has contributed to precarious legal status, human rights violations, and barriers to appropriate health care among transgender people. The proposed reconceptualisation of categories related to transgender identity in WHO's forthcoming International Classification of Diseases (ICD)-11 removes categories related to transgender identity from the classification of mental disorders, in part based on the idea that these conditions do not satisfy the definitional requirements of mental disorders. We aimed to determine whether distress and impairment, considered essential characteristics of mental disorders, could be explained by experiences of social rejection and violence rather than being inherent features of transgender identity, and to examine the applicability of other elements of the proposed ICD-11 diagnostic guidelines.

Methods This field study used a retrospective interview design in a purposive sample of transgender adults (aged >18 years or older) receiving health-care services at the Condesa Specialised Clinic in Mexico City, Mexico. Participants completed a detailed structured interview focusing on sociodemographic characteristics, medical history related to gender identity, and, during a specific period of adolescence, key concepts related to gender identity diagnoses as proposed for ICD-11 and from DSM-5 and ICD-10, psychological distress, functional impairment, social rejection, and violence. Data were analysed with descriptive statistics and univariate comparisons and multivariate logistic regression models predicting distress and dysfunction.

Findings Between April 1, 2014, and Aug 17, 2014, 260 transgender adults were approached and 250 were enrolled in the study and completed the interview. Most (n=202 [81%]) had been assigned a male sex at birth. Participants reported first awareness of transgender identity at a mean age of 5.6 years (SD 2.5, range 2–17), and 184 (74%) had used health interventions for body transformation, most commonly hormones (182 [73%]), with the first such intervention at a mean age of 25.0 years (SD 9.1, range 10–54). 84 (46%) of those who had used hormones did so initially without medical supervision. During adolescence, distress related to gender identity was very common, but not universal (n=208 [83%]), and average level of distress was quite high among those who reported it (79.9 on a scale of 0 [none at all] to 100 [extreme], SD 20.7, range 20–100). Most participants (n=226 [90%]) reported experiencing family, social, or work or scholastic dysfunction related to their gender identity, but this was typically moderate (on a scale of 0 [not at all disrupted] to 10 [extremely disrupted], family dysfunction mean 5.3 [SD 3.9, range 0–10]; social dysfunction mean 5.0 [SD 3.8, range 0–10]; work or scholastic dysfunction mean 4.8 [SD 3.6, range 0–10]). Multivariate logistic regression models indicated that distress and all types of dysfunction were strongly predicted by experiences of social rejection (odds ratios [ORs] 2.29–8.15) and violence (1.99–3.99). A current male gender identity also predicted distress (OR 3.90). Of the indicators of gender incongruence, only asking to be treated as a different gender was a significant predictor, and only of work or scholastic dysfunction (OR 1.82).

Interpretation This study provides additional support for classifying health-related categories related to transgender identity outside the classification of mental disorders in the ICD-11. The reconceptualisation and related reclassification of transgender-related health conditions in the ICD-11 could serve as a useful instrument in the discussion of public health policies aimed at increasing access to appropriate services and reducing the victimisation of transgender people.

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Introduction

The WHO is currently revising the International Classification of Diseases (ICD)-10,¹ and ICD-11 is expected to be approved in May, 2018. WHO's 194 Member States use the ICD as the international standard for the collection and reporting of health information, and in many countries it is used as a part of the framework for defining governments' obligations to provide free or subsidised health services to their

populations; other public and private insurers also use ICD health conditions as a basis for defining eligibility and covered services.²

The classification of conditions related to transgender identity has been controversial.^{3–5} This controversy must be understood in the context of serious health disparities, poor access to health services, and experiences of systematic discrimination and violence among transgender people around the world.^{6,7} WHO's recent report

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Research in context

Evidence before this study

Current classification systems of mental disorders, including WHO's International Classification of Diseases (ICD)-10 and the American Psychiatric Association's DSM-5, include categories related to transgender identity. These classifications are important in part because in many countries they determine access to health services, but the view of transgender people as having a mental disorder has been increasingly controversial, with calls from many parties, including the European Parliament, to facilitate access to health services for this population in some other way. A WHO Working Group on Sexual Disorders and Sexual Health, comprising experts from all WHO regions, recommended renaming these categories as gender incongruence and moving them to a new proposed ICD-11 chapter on Conditions Related to Sexual Health, which is conceptualised as a more medical chapter. DSM-5 has managed these categories differently, renaming them as gender dysphoria and continuing to classify them as mental disorders, partly based on the rationale that distress or dysfunction are essential elements of the condition. Whether distress and dysfunction in this population should be more appropriately viewed as the result of social rejection, stigmatisation, and violence toward individuals with gender variant appearance and behaviour has provoked substantial questions.

We searched PubMed for all publications in English and Spanish, including meta-analyses and reviews, from January, 1996, to December, 2015, using the terms transgender, trans, transsexual, transsexualism, gender dysphoria, gender incongruence, or gender identity along with the terms violence, stigmatisation, social impairment, or distress. Ample documentation from existing studies shows that transgender people experience high rates of harassment and violence, including sexual violence, not only from strangers but also from their own families and communities. Existing research has provided evidence of associations between experiences of discrimination, social exclusion, and violence and psychological

distress, depression, suicide attempts, and elevated risk for HIV infection, with some findings supporting the minority stress model. Other studies have provided evidence of discrimination, stigma, and mistreatment faced by transgender people within the health-care system.

Added value of this study

This results of this first field test of the Working Group's proposals in a relevant health-care setting in a large, middle-income country support the major elements of the ICD-11 proposal. During adolescence, distress was very common among this transgender population, although not universal, and average level of distress was high. Family, social, and work or scholastic dysfunction were also common and typically moderate. However, consistent with previous research on the minority stress model, distress and all types of dysfunction were more strongly predicted by experiences of social rejection and violence than by gender incongruence *per se*.

Implications of all the available evidence

This study supports the removal of categories related to gender identity from the ICD classification of mental disorders given that distress and dysfunction, considered to be defining features of mental disorders, were not universal and were found to be more strongly related to experiences of stigmatisation and violence than to gender incongruence. Very high observed rates of social rejection and violence experienced by the transgender individuals participating in this study suggest a continuing need for legal protections, social policies, and family interventions to reduce these experiences. This study is being replicated in other countries. The reconceptualisation and related reclassification of transgender-related health conditions in the ICD-11 could serve as a useful instrument in the discussion of public health policies aimed at increasing access to appropriate services and reducing the victimisation of transgender people.

on "Sexual health, human rights, and the law"⁷⁸ described how poor access to accurate information and appropriate health services can have serious behavioural and mental health consequences for transgender people, including increased HIV-related risk behaviour, anxiety, depression, substance abuse, and suicide.^{9,10} Public and private insurers in many countries often do not provide coverage for transgender-related health services.^{7,8,11}

Because of the ICD's important role in defining health conditions and in determining access to health services, retaining health conditions in the ICD-11 related to transgender identity has been widely, although not universally, viewed as necessary in the current global health context.^{3,4} In ICD-10, approved in 1990, these categories are called gender identity disorders and are included in the chapter on Mental and Behavioural Disorders.^{12,13} However, stigma associated with both

transgender status and mental disorders has contributed to precarious legal status, human rights violations, and barriers to appropriate health care among transgender people.⁶⁻⁸ The definition of conditions related to transgender identity as mental disorders has been used to justify denial of coverage for these conditions by governments and private health plans and has contributed to the perception that transgender people must be treated by psychiatric specialists, further restricting access to services that could be provided at other levels of care. The fact that transgender people have been considered to have a mental disorder has also been misused by some governments to deny self-determination and decision-making authority to transgender people in matters ranging from changing of legal documents to child custody to reproduction.^{3,4,6-8} In 2011, in a unanimous resolution, the European Parliament called on WHO "to withdraw gender

identity disorders from the list of mental and behavioural disorders, and to ensure a non-pathologising reclassification” as a part of the development of ICD-11.¹⁴

Categories related to transgender status have been retained in the most recent classification of mental disorders of the American Psychiatric Association, DSM-5.¹⁵ DSM-5 renamed gender identity disorder as gender dysphoria, defined by “marked incongruence between one’s experienced/expressed gender and assigned gender of at least 6 months’ duration” and “clinically significant distress or impairment in social, school, or other important areas of functioning” (p 452). Both the name of the DSM-5 condition—dysphoria—and the diagnostic criteria therefore emphasise distress and dysfunction as integral aspects of the condition and a central rationale for classifying the category as a mental disorder. A challenge to this conceptualisation is the question of whether distress and dysfunction related to the social consequences of gender variance (eg, stigmatisation, violence) can be distinguished from distress related to transgender identity.^{16,17}

By contrast, the proposal for WHO’s ICD-11 is to remove categories related to transgender identity from the Mental and Behavioural Disorders chapter and place them in a new ICD-11 chapter called Conditions Related to Sexual Health,¹⁸ which is conceptualised as a more medically oriented chapter. The ICD-11 proposal names the category gender incongruence and emphasises the individual’s subjective experience of incongruence between the individual’s experienced gender and the assigned sex.³ The proposed diagnostic guidelines note that gender incongruence can be associated with clinically significant distress or impairment in social, occupational, or other important areas of functioning, particularly in disapproving social environments, but neither distress nor functional impairment is a diagnostic requirement.

Mexico, like several other Latin American countries, has some federal protections against discrimination related to gender identity through a general national programme for equality and non-discrimination. Much stronger local protections are in place in Mexico City, where behaviours related to physical or psychological abuse of transgender people and any limitation or restricted access to public spaces, employment, or schools on the basis of gender identity or gender expression are explicitly prohibited. Nevertheless, many transgender people in Mexico City have reported rejection, exclusion, discrimination, and conditions of vulnerability and marginalisation. In one sample of 500 transgender women in Mexico City, 60% had supported themselves through sex work, at least 11% had lived on the street, 25% had been in prison, and a high proportion were HIV positive.¹⁹ This study was particularly likely to include marginalised individuals with few economic resources owing to its sampling method, but nonetheless provides an indication of the

scope of the challenges faced by this group. Accurate population-based data for the number of transgender people in Mexico City are not available, but a conservative estimate^{20,21} would suggest that there are at least 26 700 transgender people among Mexico City’s population of 8.9 million and at least 63 600 among the greater metropolitan area’s population of about 21.2 million.

Publicly funded health services available to transgender people in Mexico City are scarce. The Condesa Specialised Clinic is the only specialised clinic in the public health-care system in the greater Mexico City area that provides comprehensive services for transgender adults, including hormonal treatment and related medical supervision, psychotherapeutic support, and prevention and treatment of sexually transmitted infections and HIV/AIDS, as appropriate. Individuals are eligible to receive services at Condesa Specialised Clinic only if they have no form of employer-based or private health insurance, so that the clinic mainly serves individuals with few economic resources and many of those who work do so as part of the informal sector. As of the end of 2015, the Condesa Clinic was providing health services to 1395 transgender people. Of these, 1144 (82%) identified as transgender women (trans women) and 16% (n=223) as transgender men (trans men), with the rest identifying in some other way. HIV prevalence among the Condesa population was 40% among trans women and 0% among trans men.²²

The aim of this study was to compare the proposed diagnostic elements of ICD-11 gender incongruence, DSM-5 gender dysphoria, and the ICD-10 category transsexualism to transgender people’s own self-reported experience of gender incongruence, distress, and dysfunction. Moreover, the study sought to examine whether experiences of distress or dysfunction were universally reported by transgender people in association with their experience of gender incongruence, as would be implied by the conceptualisation of transgender identity as a mental disorder, and whether there was evidence that distress and dysfunction could be attributed to experiences of social exclusion, prejudice, stigmatisation, and violence. This study was done among a sample of transgender people receiving health-care services at the Condesa Specialised Clinic in Mexico City, Mexico, and was the first field test of the ICD-11 proposals for gender incongruence in a relevant health-care setting in a large, middle-income country.

Methods

Study design and participants

This was a retrospective interview study of adult transgender people (aged ≥18 years old) who were receiving transgender-related health services at the Condesa Specialised Clinic in Mexico City. The transgender community receiving services at the clinic were informed about the study through an information

session organised by clinical leaders and the research team and through flyers and additional information available in the clinic. Transgender individuals receiving services in the Condesa Specialized Clinic who expressed an interest in possibly participating in the study were referred to a research assistant, one of whom was present in the clinic during normal clinic hours throughout the period of data collection. The research assistant provided a full explanation of the study, including the focus of the interview and that it would take about one hour. If the individual did not agree to participate in the study, the research assistant requested permission to use a few demographic data elements for the purpose of comparing participants and non-participants. If the individual agreed to participate and signed the consent form, the research assistant proceeded to conduct the research interview in a private interview room at the clinic.

All study procedures were approved by the Ethics Committee of the National Institute of Psychiatry Ramón de la Fuente Muñiz, Ministry of Health, Mexico. All participants provided written informed consent.

Procedures

The structured interview used in the study was done in Spanish. The complete interview in English is provided in the appendix (Spanish version available on request). The structured interview had been piloted among ten volunteer transgender individuals receiving services in the Condesa Specialized Clinic, and the language and terminology adjusted based on their feedback. Interviews were undertaken by four research assistants with backgrounds in mental health who participated in a half-day training session, which included role plays and practice interviews.

The interview included questions related to sociodemographic status; medical history related to gender identity (eg, use of hormones, surgery, and other health services); experiences of gender incongruence; psychological distress; functional impairment; social rejection; and violence. Questions related to gender incongruence, distress, and dysfunction (the key diagnostic elements under both the ICD-10 and the DSM-5), and to social rejection and violence were asked with reference to a particular period of time, hereafter referred to as the interview index period. The interview index period was conceptualised as a specific, salient, and fairly standard period in the lives of the study participants in which it was considered relatively likely that gender incongruence, distress, and dysfunction (the central diagnostic elements) would occur. It was anticipated that the selected period would most frequently be during adolescence, when the person became aware of the appearance of secondary sex characteristics associated with a non-preferred gender. This time has been described as a crucial and often difficult period in the lives of transgender people.²³

To situate participants in this interview index period, they were first asked at what age they first became consciously aware that they might be transgender and that perhaps they would “need to do something” about this. This question was intended to focus on a more conscious awareness of transgender identity rather than simply a retrospective sense of identifying with a different gender from an early age. If this age had occurred during childhood, before adolescence, participants were then asked at what age they first became aware of the development of secondary sex characteristics associated with a non-preferred gender. If the age of awareness of transgender identity had occurred after adolescence, participants were to be asked the questions about diagnostic elements and experiences of social rejection and violence in relation to that period, but this never occurred during the 250 interviews.

Thus, the interview index period for the study was in all cases during adolescence, during the time after participants’ first awareness of secondary sex characteristics. Once the interview index period was identified, participants were instructed to answer the questions based on their feelings, thoughts, and experiences at that particular time. The interview method for focusing on the specific interview index period was based on the method for historical reporting of psychiatric episodes in the Structured Clinical Interview for DSM-IV.²⁴

The interview questions were structured so as to cover all major diagnostic elements for the proposed category gender incongruence of adolescence and adulthood in ICD-11, transsexualism in ICD-10, and gender dysphoria in adolescents and adults in DSM-5. The point of doing this was not to examine whether the individual participants, who were all adults with a transgender identity, met the diagnostic requirements of different diagnostic systems during their adolescence. Rather, the goal was to examine the relationships among these diagnostic elements and to experiences of social rejection and violence at a specific, salient, and fairly standard point in time.

Distress during the interview index period was assessed in both a categorical and a dimensional manner. The initial categorical dichotomous question was, “During the time we are talking about (eg, in your adolescence... at age...), did you experience psychological distress related to your gender identity?” If the participant responded yes, this was followed by another question: “How much psychological distress did you experience?” The participant was asked to answer the second question using a visual analogue scale ranging from 0 (none at all) to 100 (extreme).

Functional impairment was assessed using an adaptation of the Sheehan Disability Scale,²⁵ which assesses disability across three domains (family, social, and work or school). The Sheehan Disability Scale was

See Online for appendix

adapted for this study to refer to the established interview index period rather than to the past week, and participants were asked the extent to which they felt that any reported disruption in functioning was related to their gender identity, rather than to “the symptoms” as in the original scale.

Statistical analysis

Means (SDs) and ranges were calculated for continuous variables. Contingency table χ^2 tests were used to test differences among groups for categorical variables and independent samples *t* tests were used for continuous variables. The Bonferroni correction for multiple family-wise comparisons was applied for continuous variables and the Holm correction was applied for categorical variables. Multivariate logistic regression analyses were done to determine whether distress and dysfunction were predicted by variables related to the experience of gender incongruence, violence, and social rejection. The Akaike Information Criterion (AIC) was used to determine which of the candidate models best approximated the data. The model with the lower AIC value is considered to be superior, although there are no defined thresholds associated with this measure. Data

were analysed with SPSS-X version 20 for Windows, except for logistic regressions and the calculation of AIC values, which were done with Stata version 13.

Results

Between April 1, 2014, and Aug 17, 2014, 260 transgender people indicated that they were willing to consider participating. Of these, five declined to participate after the study was explained by the research assistant, and five did not provide sufficient information during the interview for analysis. Of these ten people, nine were trans women (ie, assigned a male gender at birth). The present analysis is based on the sample of 250 participants who completed the interview.

Most participants had been assigned a male sex at birth ($n=202$ [81%]) and currently identified as women or trans women ($n=199$ [80%]). The mean age of the sample was 30.8 years (SD 10.2, range 18–65). Most were unmarried ($n=207$ [83%]), more than half lived with their family of origin (parents or siblings; $n=143$ [57%]), and 72% ($n=179$) had remunerated employment. Demographic characteristics by current gender identity are shown in table 1.

As shown in table 1, participants reported that they had first become aware of their transgender identity and

	Total sample (n=250)	Women/trans women (n=199)	Men/trans men (n=46)	Genderqueer (n=4)	Intersex (n=1)
Age (years)	30.8 (10.2, 18–65)	32.0 (10.5, 18–64)	26.2 (7.1, 18–55)	23.5 (7.1, 19–34)	21
Years of education	12.2 (3.5, 3–30)	12.2 (3.6, 3–30)	12.0 (3.0, 4–19)	12.7 (2.9, 9–16)	13
Employment status, remunerated	179 (72%)	146 (73%)	31 (67%)	2 (50%)	0
Unmarried	207 (83%)	160 (80%)	42 (91%)	4 (100%)	1 (100%)
Body transformation, yes	184 (74%)	159 (80%)	24 (52%)	1 (25%)	0
Hormonal treatment	182 (73%)	158 (79%)	23 (50%)	1 (25%)	0
Surgeries	36 (14%)	32 (16%)	4 (9%)	..	0
Age of first awareness of transgender identity and maybe needing to do something about it	5.6 (2.5, 2–17)	5.7 (2.5, 2–17)	5.4 (2.6, 3–17)	5.2 (3.2, 3–10)	5
Age of first awareness of secondary sex characteristics (interview index period)	12.9 (1.9, 7–21)	13.0 (1.9, 7–21)	12.1 (1.6, 9–16)	14.7 (2.3, 13–18)	14
Age at first hormonal treatment	25.0 (9.1, 10–54)	24.9 (9.2, 10–54)	25.1; 8.2; 17–53	32	..
Age at first surgery for body transformation	28.8 (7.3, 17–53)	28.9 (7.4, 17–53)	28.7 (6.6, 21–36)	..	..
Type of surgery					
Breast implants	15 (42%)	15 (47%)	..	..	..
Nose	14 (39%)	14 (44%)	..	..	..
Sexual reassignment	7 (19%)	5 (16%)	2 (50%)	..	..
Orchiectomy	4 (11%)	4 (13%)	..	..	..
Liposuction	3 (8%)	4 (13%)	..	..	..
Chin	3 (8%)	3 (9%)	..	..	..
Mastectomy	2 (6%)	..	2 (50%)	..	..
Cheekbones	2 (6%)	2 (6%)	..	..	..
Buttock implants	2 (6%)	2 (6%)	..	..	..
Hysterectomy	1 (3%)	..	1 (25%)	..	..
Phalloplasty	1 (3%)	1 (3%)	..	..	..

Data are mean (SD, range) or n (%).

Table 1: Demographic characteristics, ages related to trans identity and body transformation, and health services used for body transformation, by current gender identity

felt that they might need to do something about it at a mean age of 5.6 years (SD 2.5; range 2–17). Participants reported first becoming aware of secondary sex characteristics at an average age of 12.9 years (SD 1.9; range 7–21). A high percentage of participants reported having used some kind of health service for body transformation at some point in their lives ($n=184$ [74%]), most commonly hormone treatment, which 73% of the sample ($n=182$) had received, initiated at an average age of 25.0 years (SD 9.1; range 10–54), and without medical supervision in 46% ($n=84$) of cases. 14% ($n=36$) reported having received surgery, with the first surgery reported at an average of 28.8 years (SD 7.3; range 17–53). The specific body transformation surgeries that participants reported receiving are shown in table 1. Trans women were significantly more likely than trans men to have received hormonal treatment ($n=158$ [79%] for trans women vs $n=23$ [50%] for trans men; $\chi^2=16.7$, $p<0.0001$). Trans women also reported higher rates of surgery for body transformation than did trans men ($n=32$ [16%] for trans women vs $n=4$ [9%] for trans men), but this difference was not significant ($\chi^2=1.6$, $p=0.20$).

During the interview index period, participants reported having experienced an intense level of desire to be a different gender than the one assigned at birth. On a scale of 1 to 6, with 6 representing the most intense level of desire, the average reported level of desire to be a different gender was 5.4 (SD 0.8; range 2–6). Participants reported discomfort with several aspects of their bodies, as well as a variety of changes they had made during that time to make themselves more similar to their desired gender. Experienced discomfort with specific body aspects and behavioural changes participants reported performing during the interview index period to be more like the desired gender are shown in table 2.

Psychological distress during the interview index period related to their experienced gender identity was reported by 83% ($n=208$) of participants, with depressive symptoms being most common ($n=159$ [76% of those who reported distress]). Average level of distress was quite high among those who reported it: 79.9 on a scale of 0 (none at all) to 100 (extreme; SD 20.7, range 20–100). Although most trans women and trans men reported experiencing distress during the interview index period, the proportion of trans men reporting distress (93.5%; $n=43$) was higher than was the proportion of trans women (80.9%; $n=161$; $\chi^2=4.23$, $p=0.04$). 7% ($n=14$) of those who experienced distress reported engaging in self-destructive behaviours in response to their distress, including fighting, abusing substances, and attempting suicide. 39% ($n=81$) of those who experienced distress reported having received specialised psychological or psychiatric treatment, and about two-thirds of these ($n=52$ [64%]) reported finding the treatment to be beneficial. Differences between participants who reported distress associated with their gender identity

during the interview index period and those who did not are shown in table 3. Participants who reported distress had a slightly higher level of education and higher reported levels of concurrent family, social, and work or scholastic dysfunction than did individuals who did not

	Total sample* (n=250)	Male sex assigned at birth (n=202)	Female sex assigned at birth (n=46)
Body area of discomfort during interview index period			
Genitals	171 (68%)	134 (66%)	36 (78%)
Voice	113 (45%)	87 (43%)	26 (57%)
Pubic hair	93 (37%)	84 (42%)	9 (20%)
Hips	118 (47%)	88 (44%)	30 (65%)
Chest	123 (49%)	80 (40%)	42 (91%)
Back	94 (38%)	89 (44%)	5 (11%)
Facial hair (if birth-assigned male)	..	145 (72%)	..
Body hair (if birth-assigned male)	..	123 (61%)	..
Menstruation (if birth-assigned female)	..	..	40 (87%)
Behavioural changes done during interview index period to be more like the desired gender			
Attempting to change physical appearance	206 (82%)	167 (83%)	38 (83%)
Dressing differently	204 (82%)	163 (81%)	39 (85%)
Choosing a different name corresponding to desired gender (even if not shared with others)	143 (57%)	111 (55%)	32 (70%)
Changing activities or pastimes to correspond with desired gender	79 (32%)	67 (33%)	11 (24%)
Asking to be referred to as the desired gender	107 (43%)	85 (42%)	20 (44%)

*Total sample includes males at birth, females at birth, and two participants who reported being identified as intersex at birth.

Table 2: Discomfort with body aspects and behavioural changes performed during interview index period to be more like the desired gender, by assigned sex at birth

	No distress reported (n=42)	Reported distress (n=208)	Statistics*
Gender at birth, male	38 (91%)	164 (79%)	$\chi^2=5.6$, df 2, $p=0.06$
Current gender identity, female	38 (91%)	161 (77%)	$\chi^2=4.6$, df 3, $p=0.20$
Marital status, single	33 (79%)	174 (84%)	$\chi^2=0.6$, df 1, $p=0.42$
Employment status, remunerated	31 (74%)	148 (71%)	$\chi^2=0.1$, df 1, $p=0.72$
Hormonal treatment†, yes	34 (100%)	148 (99%)	$\chi^2=0.4$, df 1, $p=0.49$
Surgery for body transformation‡	6 (18%)	30 (20%)	$\chi^2=0.09$, df 1, $p=0.75$
Experienced violence, yes	20 (48%)	137 (66%)	$\chi^2=4.9$, df 1, $p=0.02$
Experienced rejection, yes	23 (55%)	168 (81%)	$\chi^2=13.1$, df 1, $p<0.001$
Age (years)	31.1 (10.2, 19–57)	30.7 (10.2, 18–65)	$t=-0.1$, df 248, $p=0.84$
Years of education	10.8 (3.3, 4–18)	12.4 (3.5, 3–30)	$t=2.6$, df 248, $p=0.009$
Family dysfunction§	2.4 (3.7, 0–10)	5.9 (3.6, 0–10)	$t=5.6$, df 248, $p<0.001$
Social dysfunction§	2.3 (3.3, 0–10)	5.5 (3.7, 0–10)	$t=5.1$, df 248, $p<0.001$
Work or scholastic dysfunction§	2.3 (3.1, 0–10)	5.3 (3.5, 0–10)	$t=5.1$, df 248, $p<0.001$

Data are n (%) or mean (SD, range). *The pattern of significant and non-significant results reported in this table remains the same using the Bonferroni correction for multiple family-wise comparisons for continuous variables and the Holm correction for categorical variables. Differences between distressed and non-distressed participants for categorical variables (ie, frequencies) were also examined using Fisher's exact test. The pattern of results for categorical variables was the same, with the only significant differences being for experienced violence ($p=0.03$) and experienced rejection ($p=0.001$). † $n=182$ (see table 1). ‡ $n=36$ (see table 1). §Based on adaptation of the Sheehan Disability Scale.

Table 3: Differences between study participants by reporting and not reporting distress during interview index period

	Odds ratio (95% CI)	p value
Distress (AIC value reduced from 216.2 to 198.5)		
Family rejection	5.72 (2.74–11.91)	<0.0001
Gender identity, male	3.90 (1.11–13.74)	0.03
Family dysfunction (AIC value reduced from 262.9 to 258.5)		
Family rejection	8.15 (4.44–14.97)	<0.0001
Sexual violence	3.99 (1.49–10.68)	0.006
Social dysfunction (AIC value reduced from 324.4 to 315.5)		
Schoolmate or coworker rejection	2.29 (1.30–4.04)	0.004
Physical violence	2.41 (1.30–4.45)	0.005
Work or scholastic dysfunction (AIC value reduced from 305.6 to 296.8)		
Schoolmate/coworker rejection	3.37 (1.82–6.24)	<0.0001
Psychological violence	1.99 (1.03–3.83)	0.03
Asked to be referred to as desired gender	1.82 (1.02–3.25)	0.04

AIC=Akaike Information Criterion.

Table 4: Multivariate logistic regression models for dysfunction and distress among study participants (n=250)

experience distress. Gender identity and health services used for body transformation did not differ between the distressed and non-distressed groups.

Functional impairment related to experienced gender identity during the interview index period was reported by 90% (n=226) of the sample; family dysfunction was the most frequently reported (n=166 [66%]), followed by equal proportions reporting social (n=155 [62%]), and work or scholastic dysfunction (n=155 [62%]). Average level of impairment in these three areas on the adapted Sheehan Disability Scale, with scaling from 0 (not at all disrupted) to 10 (extremely disrupted) was moderate (family 5.3 [SD 3.9, range 0–10]; social 5.0 [3.8, 0–10], and work or scholastic 4.8 [3.6, 0–10]). A similar proportion of trans women and trans men reported functional impairment during the interview index period that they attributed to their experienced gender identity (177 [89%] compared with 44 [96%]; $\chi^2=1.90$, $p=0.16$).

More than three-quarters of participants (n=191 [76%]) reported having experienced social rejection related to their gender identity during the interview index period, most commonly by family members (n=161 [84% of those who had experienced social rejection]), followed by schoolmates or coworkers (n=104 [55%]), and friends (n=54 [28%]). The most common forms of rejection reported were discrimination (n=61 [32%]) and verbal or physical aggression (n=33 [17%]).

Most participants (n=157 [63%]) had been a victim of violence related to their gender identity during the interview index period. In the case of 50% (n=78) of those who had experienced it, the violence was perpetrated by a family member. Psychological violence (n=149, 95% of those who reported violence) and physical violence (n=82 [52%]) were most common, but a substantial proportion (n=44 [28%]) reported having experienced sexual violence. No differences were noted in the frequency with which trans women and trans men reported having experienced

social rejection (152 [76%] vs 35 [76%]; $\chi^2=0.002$, $p=0.96$) or violence (128 [643%] vs 26 [57%]; $\chi^2=0.97$, $p=0.32$).

A series of logistic regression analyses was done to examine predictors of dysfunction and distress among the study population. Variables related to the experience of gender incongruence were collapsed into three dichotomous indices: (1) discomfort with secondary sex characteristics, including those listed in table 2 as body areas of discomfort; (2) changes undertaken to be more similar to the desired gender; and (3) asking to be referred to as the desired gender. Asking to be referred to as the desired gender was separated in the model from dressing differently and attempting to change one's physical appearance because it represents a more active social assertion of a different gender identity. The three gender incongruence variables were entered first in the models, followed by the various types of rejection (family members, schoolmates or coworkers, and friends) and violence (psychological, physical, and sexual), with reported distress and dysfunction as the outcomes. Current gender identity was also included in the model to examine differences between trans women and trans men and because a higher proportion of trans men reported distress. These models are shown in table 4, which includes only significant predictors for each variable. All logistic regression models correctly classified more than 80% of participants with distress and dysfunction. Improvements in model fit were also evident from a reduction in AIC values.

Having a male gender identity was a significant predictor of distress during the interview index period, but not of dysfunction. None of the gender incongruence variables were significant predictors of distress or dysfunction among the sample, except that "asking to be referred to as the desired gender" was a predictor of work or scholastic dysfunction. Rejection and violence variables were significant predictors of distress and all types of dysfunction (family, social, and work or scholastic) in the study population.

Discussion

The reports collected by this large retrospective study of transgender people's own experiences support the ICD-11 reconceptualisation of gender incongruence and its removal from the classification of mental disorders in several ways. This is different from the DSM-5 conceptualisation of gender dysphoria, which requires distress or dysfunction for the diagnosis. These aspects of the DSM-5 diagnostic criteria are key because without them gender dysphoria would not fulfil the requirements of DSM-5's own definition of a mental disorder. By contrast, the proposed diagnostic guidelines for ICD-11 indicate that distress and dysfunction can occur in disapproving social environments and that individuals with gender incongruence are at increased risk for psychological distress, psychiatric symptoms, social isolation, school dropout, loss of employment,

homelessness, disrupted interpersonal relationships, physical injuries, social rejection, stigmatisation, victimisation, and violence.

Study participants universally reported experiences of gender incongruence during their early adolescence (discomfort with aspects of their bodies and attempts to change their appearance, behaviour, or treatment to be more consistent with the desired gender). Distress and dysfunction were very common, but not universal, and were more strongly predicted by experiences of social rejection and violence than by gender incongruence, consistent with the perspective that these reflect the result of stigmatisation and maltreatment rather than integral aspects of transgender identity.^{17,26} This finding might offer a potential explanation for the relation between distress and years of education reported in this sample. Although, generally, better educated people have lower levels of distress than their less well educated counterparts, in part because they have better socioeconomic circumstances and better access to health care,²⁷ transgender individuals are at risk for experiencing at-school victimisation for failing to conform to gender norms,²⁸ which is a factor associated with psychological distress.²⁹ This study cannot address this hypothesis, and additional research is needed to explore it further.

Although other possible causal hypotheses cannot be ruled out based on this retrospective study (eg, that some third factor affects both the likelihood of victimisation and of distress and dysfunction), the idea that negative psychological and behavioural symptoms arise as products of persistently hostile social responses rather than as expressions of inherent psychopathology among devalued minority groups is consistent with previous research on the minority stress model among lesbian, gay, and bisexual populations.³⁰ Rates of experiences related to social rejection and violence were extremely high in this population, and the frequency with which this occurred within participants' own families is particularly disturbing. Unfortunately, the level of maltreatment experienced by the current Mexican sample is consistent with available data from other parts of the world.^{6–10,31,32} Following *The Lancet's* call for the health community to accept that transgender health is our responsibility³³ and to develop a comprehensive approach that includes gender affirmation as a public health framework,³⁴ it seems appropriate for us to consider as a field how labelling responses to social rejection and violence as a form of psychopathology and then conceptualising these as intrinsic to the individual and justifying the diagnosis of a mental disorder contributes to the perpetuation of this victimisation.

ICD-11 and DSM-5 have both proposed reducing the duration requirement for gender incongruence to “several months” and to 6 months, respectively, from 2 years in the ICD-10 and the DSM-IV. In this study, the average delay between first awareness of transgender identity and receiving transgender-related health services

was nearly 20 years. Yet, in many countries, transgender people who do succeed in presenting for care must be assessed by a specialist psychiatrist to access gender transition services; the 2 year clock starts at the time of the first psychiatric evaluation, ostensibly to ensure that the transgender person is certain about the decision to seek such services, and more than one specialist evaluation might even be required.³⁵ WHO's proposed reconceptualisation provides a rationale for lowering these burdensome requirements, which these data suggest are unnecessary, while reducing the likelihood that transgender individuals would begin interventions for body transformation without medical supervision, as had nearly half of the individuals in this sample who had used hormones.

In most countries, access to non-routine health treatments (eg, hormone therapy and surgeries in the case of transgender people) requires a medical diagnosis of a corresponding health condition.³⁴ However, WHO has already asserted in ICD-10 that social disapproval is not a basis for considering a condition to be a mental disorder.³⁶ In a previous study, a greater proportion of mental health professionals recommended removal of transgender diagnoses from mental disorder classifications than any other category, mainly because they saw it as a form of stigmatisation.³⁷ The results of this study support placement of health conditions related to transgender identity outside the ICD-11 chapter on mental and behavioural disorders.^{3,18}

This study has important limitations related to its method of recruitment and sample selection. This study used a volunteer sample who were not representatively selected even within transgender clients of the Condesa Specialized Clinic in Mexico City. Transgender individuals who did not present for such services in this setting were obviously not included. Therefore, the results of this study should not be taken as estimates of prevalence or other epidemiological parameters. At the same time, this study consisted of systematic and detailed interviews of a large sample of transgender individuals, about whom available information is still quite limited. In particular, no other study so far has systematically compared the diagnostic requirements of different classification systems based on transgender people's descriptions of their own experiences. However, the sample of transgender men in this study was small, and larger samples will be important to understand the nature of these processes in that group. This study is currently being replicated in other countries, including Brazil, France, India, Lebanon, and South Africa and it is expected that results will be available for all participating countries before the end of 2017. Examination of whether the patterns noted in this study apply across cultures and languages will be important.

Another limitation of this study is that the data examined are based on participants' recollection and reconstruction of their experiences of gender incongruence, dysfunction, and distress at a very young age. Such memories might be

substantially influenced by subsequent experience, although in this regard the results of this study are no different from those of other retrospective diagnostic or epidemiological interviews. In view of its retrospective nature, the interview was designed to generate information that was as specific and accurate as possible regarding the most relevant time period. A prospective study could offer superior information. In view of the young age at which participants reported having undergone the relevant experiences (table 1), a prospective study would necessarily involve children. Such studies are difficult methodologically and ethically, and generally can only involve children who present for treatment, many of whom are likely not to be transgender as adults.^{4,23,38}

This study represents an important step in applying the proposed ICD-11 classification of gender incongruence to a volunteer sample of transgender people receiving services at a specialised clinic in Mexico City. Overall, the results of this study support the ICD-11 conceptualisation of gender incongruence, which views distress and dysfunction as commonly associated with transgender identity rather than as an intrinsic aspect of the diagnosis, and WHO's proposal to move the category out of the classification of mental disorders. Future research should examine the applicability of these diagnostic requirements, and in particular the relation of distress and dysfunction to experiences of stigmatisation and violence, in other global samples of transgender people and using other methods. Very high observed rates of social rejection and violence experienced by the transgender individuals participating in this study suggest a continuing need for legal protection, social policies, and family interventions to reduce these experiences in Mexico and in other parts of the world. The reconceptualisation and related reclassification of transgender-related health conditions in the ICD-11 could serve as a useful instrument in the discussion of public health policies aimed at increasing access to appropriate services and reducing the victimisation of transgender people.

Contributors

RR, HV-R, and GMR designed the study, and implementation of the study procedures was supervised by HV-R, JC-I, and VR-P. TD-M did the literature search. AF did the data analysis. RR, AF, and GMR prepared the first draft of the report and all other authors made substantive contributions to the final report.

Declaration of interests

We declare no competing interests.

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