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An exploration of mental distress in transgender people in Ireland with reference to minority stress and dissonance theory

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ABSTRACT

Introduction: Internationally mental distress is more prominent in the LGBTI community than the general population. The LGBTIreland study was set up to take stock of this in the Republic of Ireland. This paper reports on the analysis of the transgender group with reference to minority stress theory and cognitive dissonance theory.

Method: An online survey was conducted addressing several aspects of mental health and distress that received responses from all groupings (n = 2,264) among which 12.3% (n = 279) identified as transgender. The survey consisted of several validated tools to measure depression, anxiety, stress (DASS-21), coping (CSES), self-esteem (RSES), alcohol and drugs misuse (AUDIT) and a variety of questions addressing demographics, experiential aspects, coping and self-related factors. Data analysis focused on predicting mental distress using DASS-general (composite of depression, anxiety and stress).

Results: Transgender participants reported higher levels of mental distress, self-harm, suicidal ideation and attempts, and lower levels of self-esteem in comparison with the LGB groups, as well as the general population. Hierarchical multiple regression showed that 53% of variance in mental distress could be predicted from reduced self-esteem, the experience of harassment and not belonging in school. Furthermore, mental distress was highest among younger participants, those who were 'not out', those who had self-harmed and used avoidant coping. There was no significant difference in distress levels among those who had sought mental health support and those who had not.

Conclusions: To understand mental distress in transgender people, the minority stress model is useful when taking into account both adverse external (environmental) and internal (cognitive/emotional) factors. The cognitive dissonance mechanism is essential in outlining the mechanism whereby gender incongruence is associated with psychological discomfort, low self-esteem and high mental distress.

Introduction

This paper is based on an extensive empirical study of mental health and distress within the LGBTI[1] (Lesbian, Gay, Bisexual, Transgender, and Intersex) community in the Republic of Ireland. The specific focus in this paper is on participants who self-identified as transgender, their mental health and distress and predictive factors. The findings are contextualized within minority stress and cognitive dissonance theory.

In Ireland, like in other European countries, the number of people who identify as transgender is on the increase (Judge et al., 2014). Exact numbers are however not available because data is not captured in the national census. A conservative estimate suggests a prevalence of 3,000 (pop. 5 million) (Chevallier et al., 2019). This number needs to be considered with caution, as differences in prevalence occur depending on whether transgender identity is self-reported or diagnosed after a clinical referral. The terminology used - transgender, gender incongruence, or gender dysphoria- also leads to differences in reported prevalence (Zucker, 2017). While there are

continuous shifts in definitions (Motmans et al., 2019), the term 'transgender' is generally used at present as an 'umbrella term [.] to describe the full range of people whose gender identity and/ or gender role do not conform to what is typically associated with their sex assigned at birth' (American Psychological Association, 2015, p. 7). 'Gender incongruence' indicates the discrepancy between experienced gender identity and gender-related physical characteristics. The potential source of distress generated by this is referred to as 'gender dysphoria' (Claahsen-van der Grinten et al., 2021; Ho & Mussap, 2017). Emergent terms such as 'non-binary' or 'non-conforming', add richness to our understanding, but further complicate estimating prevalence.

Notwithstanding the fact that the majority of transgender people are healthy, resilient individuals, and transgender identities are increasingly understood as a matter of human diversity rather than pathology (Canady, 2019), significant levels of mental distress have been found among transgender populations internationally (Abramovich et al., 2020; Bouman et al., 2016; Budge et al., 2013; Clements-Nolle et al., 2006; Dickey et al., 2015). Research evidence highlights higher degrees of mental health disparities among transgender people compared to other LGB groups (Pitts et al., 2009) and the general population (Abramovich et al., 2020; van der Miesen et al., 2020). In Ireland, the situation is no different. Depression, suicide and self-harm rates among the transgender community are elevated (Judge et al., 2014; Mayock et al., 2009; McNeil et al., 2013).

Conceptualizing transgender mental health: Minority stress and dissonance

Transgender disparities in mental health are often explained with minority stress theory (Meyer, 1995, 2003, 2007), which is based on the premise that minorities or stigmatized groups face unique stressors not experienced by the general population, such as discrimination, violence, harassment, and stigma. This increases vulnerability to adverse mental health outcomes. Specific for transgender people, the theory highlights stress caused by non-affirmation of identity by others, including social, legal and health care institutions grounded in a cisnormative culture. Several studies have demonstrated its applicability to transgender populations (Bouman et al., 2016; Budge et al., 2013; Clements-Nolle et al., 2006; Hendricks & Testa, 2012; Meyer & Frost, 2013; Puckett et al., 2021; Valentine & Shipherd, 2018; White Hughto et al., 2015). The theory has been widely adopted, but in its emphasis on external factors provides less insight into how people internally process these pressures, including the intrapsychic impact of gender incongruence. Specifically, the internalization of stigma, leading to self-stigmatization is a matter of concern. Research has shown that self-stigmatization generates incongruence and inner conflict which in turn reduces self-esteem, wellness, and mental health (Berg et al., 2016; Herek, 2000; Lingiardi et al., 2012; Meyer, 1995, 2003, 2013).

The mechanism whereby inner conflict or incongruence translates into stress can be understood within cognitive dissonance theory (Aronson, 1968; Festinger, 1957). Festinger's original conceptualization emphasized that inconsistency within our thoughts leads to discomfort, or cognitive dissonance. Dissonance discomfort has drive-like properties which motivate behavioral and cognitive efforts to reduce it. Aronson (1968) and Steele (1988) (and others) added that inconsistencies that touch on the self are most likely to generate high levels of dissonance discomfort. Dissonance is accompanied by sympathetic and central nervous system arousal (de Vries et al., 2015) equivalent to the stress response (Selye, 1956). Normally, the dissonance response is part of a self-regulatory mechanism whereby internal consistency is maintained, dissonance discomfort is reduced, and peace of mind is restored (Gawronski & Strack, 2012). However, some inconsistencies are hard to resolve and can lead to sustained dissonance arousal resulting in stress and mental health problems (Indregard et al., 2018; Tryon & Misurell, 2008) and possible reduction in self-esteem (Tesser, 2000).

It should come as no surprise that the term 'dissonance' has been related to the transgender experience (Pullen Sansfaçon et al., 2020) and a number of authors have argued for the inclusion of dissonance theory within the minority stress perspective (Bejakovich & Flett, 2018; de Vries

et al., 2020; Meladze & Brown, 2015). The strength of dissonance theory is that it explains the mechanism whereby gender incongruence (inconsistency) leads to dysphoria (dissonance), and the drive to reduce the related discomfort (dissonance reduction). This may take place through a variety of cognitive or behavioral options, including gender transitioning. Furthermore, the association of prolonged dissonance with mental health problems makes it particularly relevant within the context of this study.

Pivotal is the implication that gender transitioning and coping methods can be understood as dissonance reduction efforts (McGrath, 2017), and that their effectiveness has mental health implications. Many coping approaches only provide short-term relief. These include denial or avoidance (not coming out) and seeking distraction or self-medication (drugs, alcohol). These and other dysfunctional coping strategies have been shown to pose long-term mental health risks (Budge et al., 2013; Freese et al., 2018; Talley et al., 2016). In contrast, dissonance reduction through seeking affirmative support from the environment by finding embeddedness within family, school and work, and coming out in a supportive environment tends to prevent mental health problems (McCann & Sharek, 2014; Yadegarfard et al., 2014).

Of course, medical gender transitioning is often considered the most effective solution to gender dysphoria and therefore long-term dissonance reduction. Unfortunately, the process tends to take years and is often marred with obstacles, which provide challenges to mental health (MacKenzie et al., 2009). Also, stigmatization after transitioning may increase, especially for trans men, which may reduce its mental health benefits (Verbeek et al., 2020). Some authors have therefore emphasized that, in addition to affirmative support and gender transitioning, stable dissonance reduction can be brought about through self-acceptance (de Vries et al., 2020; Logie et al., 2019; Rees et al., 2021) or identity synthesis (Young, 2014).

To conclude, it is evident that the cognitive dissonance lens adds to the explanatory power of minority stress theory. In addition to the external focus of minority stress, the dissonance model provides a mechanism to understand internal factors and may be particularly relevant to explore transgender mental health.

The LGBTIreland study

Very few studies on the mental health of the LGBTI community in Ireland have been conducted. The most notable one, the 'Supporting LGBT Lives' study (n = 1,110) (Mayock et al., 2009), showed that mental health issues were more common among LGBTI people than in the general population. The 'LGBTIreland study' is a recent effort to evaluate the current situation (Higgins et al., 2016b). The present paper is based on these data and provides an in-depth analysis specific for the Irish transgender group (n = 279), encompassing relevant demographics, behavioral and coping responses, self-related aspects, and mental health problems. Within these domains the predictive relationship of both internal and external factors toward mental distress is explored (see Figure 1). The findings are discussed with reference to minority stress and dissonance theory.

Method

Design

A quantitative survey was developed that made use of scale-based, yes/no items. Several validated tools were included. The questions focused on demographics, self-related aspects, experiences and coping, and mental distress. The survey was hosted online using the SurveyMonkey tool (SurveyMonkey Inc.). Hard copy requests could be made to include potential participants without internet access. Any persons who identified as LGBTI, who were 14 years of age or over, and lived in the Republic of Ireland were eligible to participate. This paper reports on the findings related to participants who self-identified as transgender, although comparisons are made with the LGB participants.

Recruitment and sampling

Previously successful recruitment strategies aimed at the LGBTI population were replicated for this study (Higgins et al., 2011; Mayock
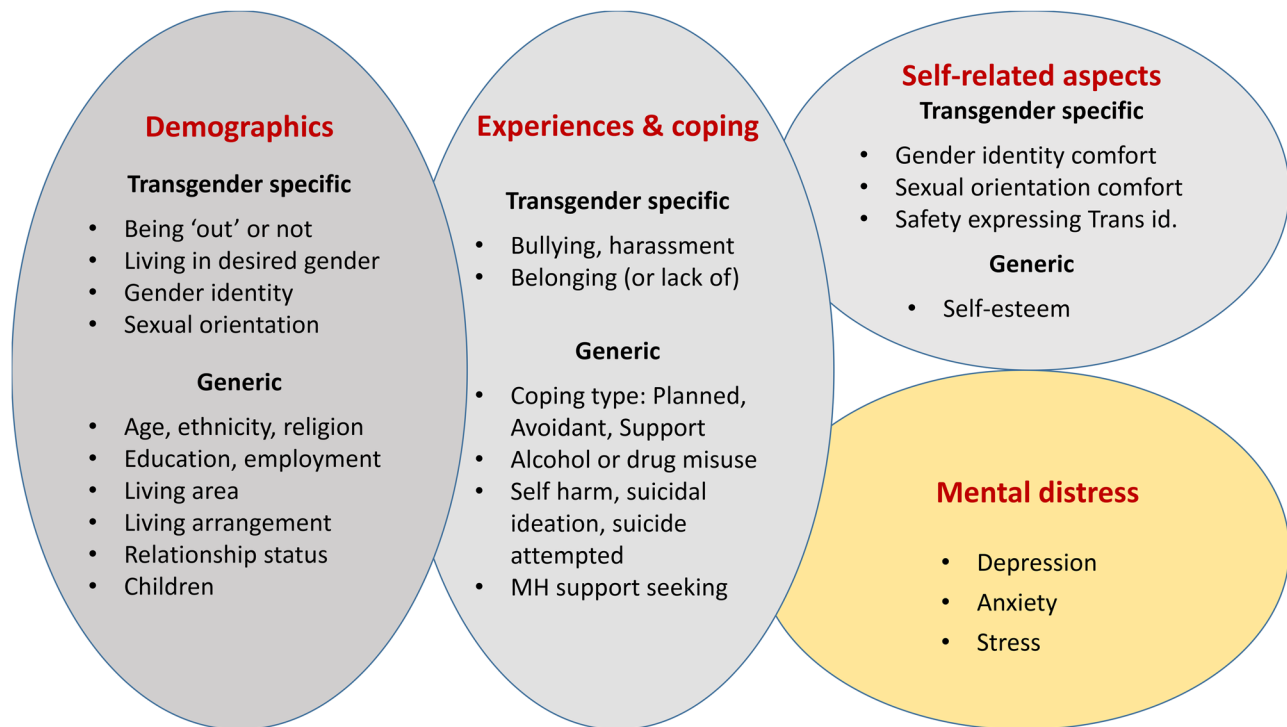
Figure 1. Variables included in the study.

et al., 2009). A multi-pronged recruitment approach involved informing local and national social, health, youth and LGBTI organizations of the study. The study was promoted through social media, and other online methods. Information posters were also sent to over 75 organizations nationwide and distributed at LGBTI events and venues throughout the country. Furthermore, announcements were broadcast on the radio publicizing the study.

Ethical considerations

Ethical approval was received from the university's Research Ethics Committee. The survey was anonymous, and the requirement for parental consent for those aged under 18 was waived. This was imperative to ensure involvement of adolescents who may not have wanted to disclose their participation to parents/guardians. Information cited in this paper has been screened to ensure that participants in the study could not be identified. All data files were password protected and stored in accordance with the Data Protection (Amendment) Act 2003 (Sheikh, 2005).

Measures

Demographic variables

- Gender identity was addressed with the question: How do you identify your gender? Please tick only one option. (see Table 1 for options). In addition, participants were asked: Do you identify as transgender, or do you have a gender identity and/or expression that is different from the sex assigned to you at birth? (YES/NO). Those who responded with YES were included in this publication.
- Sexual orientation was addressed with the question: What term do you usually use to describe your sexual orientation? Please tick one (see Table 1).
- Being 'out' in community; living in desired gender; addressed with 3-point Likert scale (see Table 1)
- Age; ethnicity; area living; employment status; highest level of education; religion; living situation (alone or with others); relationship status; children; addressed with Multi-response questions (see Table 2).

Table 1. Transgender-specific demographics and mental distress.

variable	Values (n)	DASS-general (Mean/SD)	F (p)	Eta^2
Being 'Out': Told People in Community	No one (120)	54.87 (35.22)	F(2,212)=8.74, p<.001***	.076
	Some (50)	44.56 (30.97)		
	All (45)	31.39 (27.45)		
Living in desired gender	No (51)	54.75 (31.74)	F(2,245)=8.30, p<.001***	.063
	Part-time (85)	53.34 (35.79)		
	Full-time (112)	36.83 (30.89)		
Described gender identity as	Transgender only (70)	51.83 (35.86)	F(6,249)=3.37, p=.003**	.075
	Male (39)	44.94 (35.98)		
	Female (41)	34.50 (29.10)		
	Male trans history[1] (23)	45.74 (39.18)		
	Female trans history[2] (16)	24.50 (16.88)		
	Intersex (7)[3]	77.71 (31.84)		
	Other (83)[4]	47.23 (29.94)		
Sexual Orientation	Lesbian (42)	38.86 (29.70)	F(8,247)=3.16, p=.002**	.093
	Gay (34)	47.00 (34.24)		
	Bisexual (47)	39.19 (31.23)		
	Queer (45)	54.62 (34.57)		
	Heterosexual (25)	34.56 (28.96)		
	Asexual (8)	43.75 (30.21)		
	Questioning (20)	35.90 (30.29)		
	Pansexual (23)	70.17 (35.11)		
	Other (12)	51.33 (41.11)		

[1] Male with a trans history: a person who identifies as male at present, transitioned from a female identity.
[2] Female with a trans history: a person who identifies as female at present, transitioned from a male identity.
[3] People with intersex condition can identify in different gender identities. They are born with sex characteristics (chromosomes, genitals, and/or hormonal structure) that are not strictly male or female and could represent both simultaneously. While 45 participants from the overall LGBTI group identified as Intersex, within the Transgender group this was reduced to only 7.
[4] The 'Other' category was expanded on by about half of the participants, who added statements such as questioning, non-binary, varying, etc.

Table 2. Demographics and mental distress.

Variable	Values (n)	DASS-general (Mean/SD)	F (p)[1]	Eta^2
Age (5 groups)	14-18 (73)	55.97 (33.95)	F(4,249)=9.34, p<.001***	.130
	19-25 (77)	53.87 (35.70)		
	26-35 years (43)	37.67 (26.48)		
	36-45 years (32)	38.38 (31.51)		
	45+ years (29)	19.31 (18.98)		
Religious affiliation	Roman Catholic (44)	42.05 (33.78)	F(3,252)=2.68, p=.048*	.031
	Church of Ireland (8)	73.00 (28.44)		
	No religion (171)	46.78 (33.96)		
	Other (33)	38.00 (30.12)		
Education completed	Primary school (13)	67.54 (36.09)	F(3,244)=5.62, p<.001***	.065
	Secondary lower level (62)	55.00 (35.59)		
	Secondary upper level (94)	43.85 (31.19)		
	Third level (79)	37.01 (30.98)		
Living Area	Urban/suburban (222)	43.86 (33.17)	F(1,254)=4.89, p=.028*	.019
	Rural (34)	57.47 (34.90)		
Living Arrangement	Alone (46)	40.39 (33.36)	F(2,253)=9.03, p<.001***	.067
	With parents (112)	55.41 (34.08)		
	Together with others (98)	37.02 (30.55)		
Employment status	Employed (80)	37.70 (30.55)	F(2,253)=4.79, p=.009**	.036
	Not employed (68)	43.97 (35.76)		
	Student/pupil (108)	52.65 (33.65)		
Relationship status	No partner (160)	47.99 (34.97)	F(1,253)=2.24, p=.136ns	.009
	Yes partner (95)	41.47 (31.11)		
Children	no (214)	48.55 (33.73)	F(1,253)=10.85, p=.001**	.041
	Yes (41)	30.00 (29.13)		

[1] in all tables and throughout the text the following significance indicators were used: *p <.05; **p<.01; ***p<.001; ns=not significant.

Self-related aspects

- Sexual orientation comforts (the experienced extent of feeling comfortable or at ease with one's sexual orientation); gender identity comfort (the experienced extent of feeling comfortable or at ease with one's gender identity); safety expressing gender

identity; 5-point Likert Scales (see Table 3). In the absence of a validated cognitive dissonance measure, the comfort variables were used based on Elliot and Devine's (1994) dissonance tool. Feeling uncomfortable or very uncomfortable was considered indicators of dissonance. These comfort

Table 3. Transgender specific self-related aspects/experiences and mental distress.

variable	Values (n)	DASS-general (Mean/SD)	F (p)	Eta^2
Gender identity comfort	Uncomfortable/very unc. (39)	61.23 (34.44)	F(2,244)=5.95, p=.003**	.046
	Mix comfort/uncomf. (69)	48.20 (32.15)		
	Comfortable/very comf. (139)	40.81 (33.89		
Sexual orientation comfort	Uncomfortable/very unc. (17)	45.76 (40.57)	F(2,253)=0.84, p=.920 ns	.001
	Mix comfort/uncomf. (44)	47.55 (32.91)		
	Comfortable/very unc. (195)	45.24 (33.34)		
Safety expressing gender identity	Would not do it (30)	45.07 (36.75)	F(4,238)=11.08, p<.001***	.157
	Very unsafe (41)	65.02 (27.21)		
	Unsafe (76)	55.11 (34.42)		
	Safe (71)	30.06 (27.69)		
	Very safe (25)	33.12 (30.02)		
Belonging at school	No, Not at all (50)	65.52 (35.91)	F(2,123)=10.02, p<.001***	.140
	Somewhat (59)	49.12 (30.30)		
	Yes, completely (17)	27.53 (17.28)		
LGBTI bullying in school	No (54)	40.41 (27.94)	F(1,123)=13.13, p<.001***	.096
	Yes (71)	61.07 (34.09)		
Belonging at college	No, Not at all (9)	73.78 (34.45)	F(2,97)=4.30, p=.016*	.082
	Somewhat (47)	52.72 (31.54)		
	Yes, completely (44)	41.45 (31.28)		
LGBTI bullying in college	No (78)	50.05 (32.11)	F(1,98)=.002, p=.967 ns	.000
	Yes (22)	49.72 (34.64)		
Belonging at work	No, Not at all (22)	49.09 (37.08)	F(2,122)=3.61, p=.030*	.056
	Somewhat (57)	45.12 (30.78)		
	Yes, completely (46)	31.26 (26.87)		
LGBTI bullying at work	No (91)	38.72 (30.53)	F(1,123)=1.54, p=.217 ns	.012
	Yes (34)	46.47 (32.53)		
LGBTI related verbal or written threats	Never (44)	31.82 (28.65)	F(1,245)=10.52, p=.001**	.041
	Yes (203)	49.67 (33.99)		
LGBTI related violence	Never (146)	37.66 (28.26)	F(1,231)=33.76, p<.001***	.127
	Yes (87)	62.34 (36.02)		

Table 4. Mental distress and self-esteem comparison Transgender with LGB groups within the present study (LGBTIreland study; Higgins et al., 2016a) plus percentages in DASS-21 and RSES categories.

Mental Health Outcome variable (range)	Mean/(SD) Trans (n = 270)	**Mean/(SD) LGB (n = 1624)**	t-test/ Cohen's d	Comparison Trans with norms (normal, mild, moderate, severe, extremely severe)
Depression (DASS-21) (0-42)	16.69 (13.07)	10.98 (11.15)	t(333.921)=-6.79 *** d=-.50 Trans > LGB	Trans scores in ranges: 0-9 (normal) 39.0% 10-20 (mild/moderate) 27.8% 21+ (severe/extremely) 33.2 % (DASS norms by Lovibond & Lovibond, 1995)
Anxiety (DASS-21) (0-40)	12.72 (11.71)	8.32 (9.41)	t(331.063)=-5.86 *** d=-.45 Trans > LGB	Trans scores in ranges: 0-7 (normal) 45.5% 8-14 (mild/moderate) 19.1% 15+ (severe/extremely) 35.4%
Stress (DASS-21) (0-42)	16.52 (11.51)	12.94 (10.18)	t(331.186)=-4.78*** d=-.35 Trans > LGB	Trans scores in ranges: 0-14 (normal) 55.5% 15-25 (mild/moderate) 24.2% 15+ (severe/extremely) 20.3%
Total (DASS-21) (0-122)	45.67 (33.65)	31.97 (28.02)	t(313.186)=-6.19*** d=-.48 Trans > LGB	Trans scores in ranges: 0-32 (normal) 25.6% 33-60 (mild/moderate) 29.2% 61+ (severe/extremely) 35.2%
Rosenberg RSES Self-Esteem (0-30)	15.15 (6.85)	18.75 (6.72)	t(2045)=8.13*** d=.53 Trans < LGB	RSES scores in ranges: 0-15 (low) 49.3% 16-25 (normal) 41.6% 26-30 (high) 9.1% (RSES norms by Rosenberg, 1989)

variables were also used in Mayock et al. (2009) study.

- Self-esteem - Rosenberg Self-Esteem Scale (RSES) (Rosenberg, 1989 is a 10-item scale

measuring global self-esteem with a range of 0-30 (see Table 4). The RSES has been empirically validated and administered previously to transgender individuals (Arcelus

et al., 2016; Bouman et al., 2016; Robins et al., 2001). It has been shown to have good internal consistency, good convergent and discriminant validity, and validity in different cultural contexts (Ho & Mussap, 2017). In this study, the RSES Cronbach's alpha was 0.93, indicating excellent internal consistency and reliability.

Experiences and coping variables

- Experience of bullying; LGBTI related threats; and violence. Each of these were addressed with YES/NO items and repeated for secondary education, third level education and work (see Table 5).
- Coping strategies: modified version of the Coping Strategies Indicator (CSI-15) (Dooley et al., 2012). The CSI-15 is a 15-item tool consisting of three subscales measuring planned or problem-focused coping, avoidant coping, and support-focused coping (see Table 6). Each subscale demonstrated excellent internal consistency in the present study as indicated by Cronbach's

alpha (Planned: .85; Avoidant: .85; Support Focused: .92)
- Alcohol Use Disorders Identification Test (AUDIT): 10-item screening tool for hazardous alcohol consumption (Saunders et al., 1993; Williams, 2014) (see Table 6). While no psychometric testing of AUDIT in transgender populations has been undertaken, it has evidenced good psychometric properties in diverse populations and settings (Gilbert et al., 2018). Cronbach's alpha in our study was .76.
- Experiences of self-harm; suicide ideation; suicide attempt; mental health support seeking; addressed with YES/NO questions (see Table 5)

Mental distress variables

- Depression, Anxiety, and Stress Scale, short-version (DASS-21) (Lovibond & Lovibond, 1995). The DASS-21 is the shorter version of the DASS-42 and has been shown to have adequate construct validity, high internal consistency,

Table 5. Self-harm, suicide, help-seeking and mental distress.

variable	Values (n)	DASS-general (M/SD)	F (p)	Eta^2
Self-harm	No (127)	31.54 (26.79)	F(1,251)=55.06, p<.001***	.180
	Yes (126)	60.02 (33.86)		
Suicide ideation	No (57)	26.07 (23.70)	F(1,250)=27.97, p<.001***	.101
	Yes (195)	51.56 (34.03)		
Suicide attempted	No (155)	38.08 (29.80)	F(1,249)=24.32, p<.001***	.089
	Yes (96)	49.72 (34.64)		
MH help seeking self-harm	No (52)	57.54 (37.83)	F(1,141)=.004, p=.951 ns	.000
	Yes (91)	57.91 (37.91)		
MH help seeking suicide ideation	No (76)	38.72 (30.53)	F(1,193)=.316 p=.575 ns	.012
	Yes (119)	46.47 (32.53		
MH help seeking suicide attempt	No (31)	57.23 (34.72)	F(1,94)=.279, p=.757 ns	.006
	Yes (63)	59.94 (36.44)		

Table 6. Coping response.

	Mean (sd)	Range/norms	Comparison with other Irish studies
CSI-15 Problem Solving	15.89 (4.62)	Range 5-30	Mean < young Irish adults in My World2 (M = 16.51 (4.77) (Dooley et al., 2012) t(264)=-2.26, p=.011*)
CSI-15 Support Coping	11.79 (5.01)	Range 4-24	Mean < young Irish adults in My World2 (M = 12.99 (4.72), t(266)=-4.77, p<.001***)
CSI-15 Avoidant Coping	19.23 (6.60)	Range 6-36	Mean = young Irish adults My World2 (M = 19.28 (6.21) (t(246)=.996, p=.320)
AUDIT Alcohol or drug misuse	7.46 (6.19)	Participants % in categories in present study based on drinks per week according to AUDIT norms (Williams, 2014): 00-07 (low risk): 64.3% 08-15 (increasing risk): 11.4% 16-19 (high risk): 5.3% 20-30 (possible dependence): 5.2%	Alcohol and drug use not different from Irish population (Long & Mongan, 2013)

good convergent and discriminant validity (Dickey et al., 2015; Ho & Mussap, 2017; Lovibond & Lovibond, 1995). In the current study, the overall scale (DASS-general) evidenced excellent consistency (Cronbach's alpha = .96), as did the subscales (Depression: .94; Anxiety:.88; Stress: .90). The DASS-general score (= (D + A+S) x 2) has been used as the mental distress outcome variable, with a range from 0-126. Multiplication by 2 is standard and allows equating outcomes with the DASS-42 (see Table 4).

Data analysis

Statistical analysis made use of SPSS Statistics Version 27 (IBM Corporation, 2020). Descriptive and inferential statistics were computed. Missing values were excluded pairwise. This has led to some variation in the included numbers for the variables. The following system to highlight significance was used: $p < .05^*$; $p < .01^{**}$; $p < .001^{***}$. High overall internal consistency and high correlations between the three DASS factors (Depression, Anxiety, Stress; D/A: $r(251) = .758$, $p < .001^{**}$; D/S: $r(249) =.781$, $p < .001^{***}$, A/S: $r(254) = .804$, $p < .001^{***}$) led to the decision to use the DASS-general score as the mental distress outcome variable.

Data analysis focused on (a) identifying how the factors in Figure 1 related to mental distress; (b) developing a multiple linear regression model providing optimal prediction of mental distress. A division has been made between transgender-specific and generic factors in the analysis.

Results

Demographics and mental distress

A total of 279 participants self-identified as transgender. Based on an estimated transgender population of 3,000 in the Republic of Ireland, this yields a margin of error of 5.59 at a 95% confidence level, which is acceptable. The average age of the sample was 29 years old (SD = 13.2, Range = 15-71) (see Table 2), with 27% aged between 14-18 years. Ethnicity was homogeneously white (not in the table), with the

majority living in an urban setting, and with two-thirds claiming no religious affiliation. The large representation of young people was reflected in many of them identifying as students. Noteworthy is also that about one-third had completed third level education and 28% were working for pay or profit. Under 20% lived alone, with most others living with others in a variety of arrangements. Over 40% of the sample were living with parents/guardians, again likely reflecting the number of young people in the sample. Although it must be said that in Ireland due to economic factors (high rent and house prices), many young adults in their twenties still live with their parents. A majority of 62% did not identify as 'in a relationship'. Fewer than one in five had children.

In terms of the relationship with mental distress, it is noteworthy that several demographic variables were related to levels of mental distress among the transgender sample in this study. Most effects were small (< .01) to moderate (< .06) in size, with only one effect approaching being large in size (> .14). Most importantly:

- Age showed to be related significantly with mental distress ($F(4,249) = 9.34$, $p < .001^{***}$) close to a large effect size (Eta^2, = .13), with the group 14-18 (M = 55.97, SD = 33.95) and group 19-25 (M = 53.87, SD = 35.70) showing the highest levels of mental distress at M = +/- 55. They were followed by group 26-35 (M = 37.67, SD = 26.48) and group 36-45 (M = 38.38, SD = 31.51) which still had an elevated average at around M = 38), while the 45+ year age groups (M = 19.31, SD = 18.98) showed levels comparable with DASS norms for the general public.
- Perhaps surprisingly, relationship status did not seem to be consistently related with mental distress ($F(1,253) = 2.24$, p =. 136 ns).
- Having children was significantly associated with lower mental distress levels ($F(1,253) = 10.85$, $p = .001^{**}$), although the group with children was small (n = 41).
- Other effects, such as living arrangement ($F(2,253) = 9.03$, $p < .001^{***}$), education

(F(3,244) = 5.62, p <.001***), and employment (F(2,253) = 4.79, p = .009**), showed a likely impact of age, in the sense that higher distress levels associated with younger participants emerged in those living with parents, were students, and in secondary education.

Mental distress and transgender-specific demographics

Of the transgender-specific factors, it is noteworthy that about half of participants had not 'come out' or identified as transgender in the community. The other half of the sample were about equally 'out' about their gender to some or all in the community. Almost 80% lived in their desired gender at least part-time. While identifying as transgender participants, the sample self-described their gender identity in a variety of ways. Likewise, participants also had diverse sexual orientations (see Table 1).

Each of these variables was related to significantly different mental distress outcomes indicating medium size effects (see F and Eta² scores in Table 1). Most saliently:

- Those that were 'out' in the community (F(2,212) = 8.74, p <.002***) and lived full-time in their desired gender (F(2,245) = 8.30, p <.001***) showed significantly lower mental distress scores.
- How participants described their gender identity was related to significant differences in mental distress scores (F(8,247) = 3.16, p = .002**). Those describing themselves as female or with a female transgender history showed lower mental distress. Those identifying as transgender only or intersex showed highest degrees of mental distress with other groupings in the middle.
- How participants described their sexual orientation was also related to significant differences in mental distress scores (F(6,249) = 3.37, p = .003**). In particular, the higher distress levels of participants who identified as queer and pansexual is noteworthy.

Transgender-specific self-related aspects, experiences and mental distress

Each of the *self-related aspects* (see Table 3) showed that a majority of participants perceived themselves as comfortable in their gender identity and sexual orientation. However, only a minority (around 40%) considered it safe to express their transgender identity in the community.

Findings for mental distress showed the following (see F and Eta² scores in Table 3):

- Those uncomfortable with their gender identity showed significantly higher levels of mental distress (F(2,244) = 5.95, p = .003**), while level of comfort with sexual orientation did not affect mental distress (F(2,253) = 0.84, p = .920 ns)
- Those who would not express their gender identity in the community showed less mental distress than those feeling very unsafe doing so. Those feeling safe showed much lower levels of mental distress. Although there is no linear relationship, the effect size (.157) is very large, suggesting this is a highly significant relationship (F(4,238) = 11.08, p < .001***).

In terms of transgender-specific experiences (see Table 3), it is worth highlighting that few participants felt a sense of complete belonging, while the majority of those who responded to this question suggested that they had been subjected to LGBTI-related bullying in school. The situation in college and at work was considerably less negative. Overall, almost three-quarters of participants had received threats as a result of their LGBTI identity and almost one-third responded that they had been the victim of violence. In terms of the repercussions for mental distress, the following conclusions are justified (see F and Eta² scores in Table 3):

- The experiences in school, bullying (F(1,123) = 13.13, p < .001***) and a sense of not belonging (F(2,123) = 10.02, p < .001***), were significantly associated with high mental distress. Effects are medium in size. In contrast, experiences in college or at work showed less prominent

Table 7. Correlations coping & self-esteem with mental distress (DASS-general).

Variables		CSI-15 Problem-solving Coping	CSI-15 Support-focused Coping	CSI-15 Avoidance Coping	RSES Rosenberg Self-esteem	AUDIT Alcohol & Drugs
DASS -general	Pearson Corr.	-.252***	-.063 ns	.515***	-.696***	.227**
	Sig (2-tailed	<.001	.326	<.001	<.001	.001
	N	242	246	229	249	195

or non-significant relationships with mental distress.

- Having experienced threats (F(1,245) = 10.52, p = .001**) and violence (F(1,231) = 33.76, p < .001***) significantly elevated the levels of mental distress. The effect for violence approached a large size (Eta^2 = .127).

Generic coping and mental distress

The findings for coping (see Table 6) are somewhat different from a benchmark Irish study with adults in their twenties (Dooley et al., 2012). While not entirely comparable in terms of the spread in age, it should be noted that the Transgender participants in our study showed lower levels of problem solving (t(264) = −2.26, p = .011*) and support focused coping (t(266) =-4.77, p <. 001***), but there was no difference in avoidant coping (t(246) = .996, p = .320). Alcohol use was not different from the overall Irish population (Long & Mongan, 2013).

Of these variables (see Table 7), self-esteem is significantly and most highly correlated (inversely) with mental distress (r(249) = −.70, p < .001***). Avoidant coping shows a medium size significant correlation (positively) (r(229) = .52, p < .001***) with mental distress, suggesting that avoidance can be tied in with mental distress. Alcohol use shows a low but significant correlation (r(195) = .23, p < .001***). As expected, coping through problem solving shows a significant low negative correlation (r(242) = −.25, p < .001***) with mental distress, while support-focused coping appears unrelated (r(246) = −.06, p = .326 ns).

Negative coping responses in the form of self-harm, suicide ideation and suicide attempts were common. Almost half of the sample had self-harmed, and three-quarters reported having experienced thoughts of suicide, while just over one-third had attempted suicide. Moreover (see Table 5), each of these aspects were significantly

related to mental distress (Self harm: F(1,251) = 55.06, p < .001***; Suicide ideation: (F 1,250) = 27.97, p < .001***; Suicide attempted: (F(1,249) = 24.32, p < .001***). In particular, self-harm showed a very strong effect (Eta^2 = .180) in relation to mental distress. It should be noted that the effect for attempted suicide is smaller than that for suicide ideation and self-harm. Help seeking behaviors were common. Almost three quarter (72%) of those who reported self-harming sought MH support. For suicidal ideation, this was 61% and for attempted suicide 66%. However, help-seeking efforts were unrelated to levels of mental distress. This is a significant trend because it suggests that seeking mental health support may not lead to a reduction in mental distress.

Mental distress and self-esteem comparison with LGB within present study

The transgender group scored significantly higher than the LGB participants in the present study on the DASS scales and DASS-general (t(313.186) = −6.19, p < .001***) and lower on the RSES (t(2045) = 8.13, p < .001***). It should be noted that the age distribution of the LGB and T groups were the same, so this effect cannot be attributed to age (de Vries et al. 2020). Effect sizes (Cohen's d) were in the moderate range. Generally, interpretations of effect sizes for Cohen's d are as follows: small: > 0.2; medium: > 0.5; large: > 0.8.

In relation to the general population, it needs to be mentioned that the average DASS score for the transgender group (M = 45.67) is more than double the mean for most non-clinical populations (M = 18-20) (see for instance Sinclair et al., 2012). In terms of the DASS and RSES categories it should be noted that for depression and anxiety, about one-third fell into the severe range. For stress, this was one in five. The average self-esteem in the transgender groups was low (M = 15.15, SD = 6.85) in comparison with the

findings in a benchmark study of 53 nations (M = 20.85, SD = 4.82) of which 23 were European (Schmitt & Allik, 2005). Unfortunately, Ireland was not included in this study. For the benchmarking of the RSES, it is important to mention that the scoring per item can differ between 0-3 and 1-4. Schmitt and Allik (2005) findings have been adjusted (-10) to fit with Amirkhan's (1990) standard followed in our study.

Predicting mental distress

While each of the relationships highlighted in the above should be of interest to people who identify as transgender and clinicians, it is important to determine which antecedent factors are the strongest predictors of mental distress when they are combined. To achieve this, a Multiple Regression procedure was performed with the DASS-general score as dependent variable and the most significant variables presented in the above as factors. The procedure was prepared as follows:

- Only variables with significant differences/ correlations were included;
- All yes/no variables were included as dummy variables;
- Each of the various sexual orientation and gender identity categories (see Table 1) were also included as dummy variables; However, it should be noted that categorical variables with several categories such as gender identity, which showed significant differences in mental distress levels, had low numbers in the categories and therefore lost their significance after being transformed into dummy variables.
- Preliminary multiple regression procedures were performed and led to the selection of the following significant factors: demographic (age, being 'out', living in desired gender), transgender experience (belonging, bullying, LGBTI related threats/violence), coping (problem focused, support-seeking, avoidance), AUDIT, self-harm, suicide and suicide ideation, and self-related factors (gender identity comfort, safety expressing transgender identity, self-esteem); all

non-significant factors were excluded after this stage. Several variables that had yielded significant separate effects, did not remain significant. Notably, the gender identity comfort variance became insignificant when self-esteem was introduced into the equation.
- Each procedure was performed in several permutations to test the robustness of the models. Collinearity Statistics were computed and indicated that this was not an issue.
- This process resulted in the performance of a hierarchical multiple regression in which variables were entered in three blocks/models: 1) transgender related experiences; 2) coping; 3) self-related factors.

The findings (see Table 8) showed that the following transgender related experiences in model 1 together explained 30.8% of the variance in mental distress (DASS-general): not belonging in school, not being out in the community and having experienced LGBTI-related violence. The following coping variables in model 2 added 13.9% to the explained variance: attempted suicide, self-harm and avoidant coping. Finally, model 3 containing self-esteem added a further 8.5% to the explained variance. The resulting model explained 53.2% of the variance in mental distress (Adjusted R^2 = .532, F(7,79) = 14.99, p < .001***). This is a highly significant and meaningful prediction of the outcome variable. Not belonging in school, having experienced LGBTI-related violence and self-esteem were the remaining significant factors in predicting mental distress.

It is telling that self-esteem became the most significant predictor of mental distress.

Additional analyses of variance confirmed that self-esteem was related to the most dissonant aspects of transgender identity. Those who were uncomfortable with their gender identity also had significantly lower levels of self-esteem (M = 11.80, SD = 6.98, F(2,262) = 10.94, p < .001*** Eta^2 = .077). Likewise, self-esteem was significantly lower in those who had not shared their identity within the community (M = 13.31, SD = 6.64, F(2,233) = 12.23, p < .001***, Eta^2 = .095), those

Table 8. Multiple regression results (model 1: transgender related experiences; model 2: coping variables added; model 3 self-related factors added).

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.576[a]	.332	.308	27.26634
2	.697[b]	.485	.447	24.37037
3	.755[c]	.570	.532	22.40640

Coefficients[a]					
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	59.428	5.526		10.755	<.001
	School - Belonged as LGBTI	−14.585	4.292	-.314	−3.398	.001
	Told LGBTI - people within community	−11.966	4.103	-.266	−2.917	.005
	Experienced LGBTI related physical violence (lifetime)	25.442	6.343	.377	4.011	<.001
2	(Constant)	22.129	10.328		2.143	.035
	School - Belonged as LGBTI	−10.162	3.991	-.219	−2.546	.013
	Told LGBTI - people within community	−8.013	3.886	-.178	−2.062	.042
	Experienced LGBTI related physical violence (lifetime)	14.035	6.155	.208	2.280	.025
	Suicide Attempted YES/NO	8.284	5.839	.126	1.419	.160
	Self-harm YES/NO	17.708	6.357	.258	2.786	.007
	CSI-15 Avoidant Coping	.988	.427	.213	2.311	.023
3	(Constant)	65.195	14.449		4.512	<.001
	School - Belonged as LGBTI	−7.905	3.713	-.170	−2.129	.036
	Told LGBTI - people within community	−5.985	3.610	-.133	−1.658	.101
	Experienced LGBTI related physical violence (lifetime)	13.219	5.663	.196	2.334	.022
	Suicide Attempted YES/NO	8.375	5.368	.128	1.560	.123
	Self-harm YES/NO	9.253	6.224	.135	1.487	.141
	CS-15I Avoidant Coping	.385	.422	.083	.912	.364
	Rosenberg Self Esteem Total	−1.963	.497	-.379	−3.955	<.001

a. Dependent Variable: DASS-general; Adjusted R^2 =.53, $F(7,79)$=14.99, p<.001***.

who were not or only part-time living in their desired gender (M = 13.49, SD = 6.85, $F(2,262)$ = 9.84, p < .001***, Eta^2 = .070), and those who felt that they did not belong during their school years (M = 11.46, SD = 6.50, $F(2,131)$ = 3.98, p = .021*, Eta^2 = .057).

Discussion

This study highlights a higher prevalence of mental distress and lower self-esteem among transgender people in the Republic of Ireland, in comparison with the general Irish population and the lesbian, gay and bisexual participants in the present study (Higgins et al., 2016b). These findings reflect the international literature (Abramovich et al., 2020; Budge et al., 2013; Clements-Nolle et al., 2006; Dickey et al., 2015; GEO, 2018; Olson et al., 2011; van der Miesen et al., 2020).

External factors strongly linked with high mental distress in the study were the experience of violence related to being transgender, not belonging in school, and not being 'out'. Being 'out' has been identified in other studies as a core protective factor (Mullen & Moane, 2013). *Internal factors* related to mental distress were low self-esteem

and discomfort with transgender identity. While the latter did not remain significant in the multiple regression, both these relationships were also found in a recent systematic review (Tankersley et al., 2021).

Importantly, like in other studies (Bariola et al., 2015; Reisner et al., 2015), the highest levels of distress appeared in secondary school at the age of identity formation (14-18 years old). This is of course not unique for the transgender group, as all adolescents are prone to experience inner turmoil while working toward identity achievement and acceptance (Marcia, 1980). However, within transgender young people this period may well be particularly critical, and the importance of school supports to foster a sense of belonging, as the present study showed, may well be essential to developing self-acceptance (de Vries et al., 2020) of one's transgender identity. It is evident that the 14–18 year-old group in our study causes most concern. Their situation shows best how external and internal factors interact in bringing about mental distress.

Theoretically, the findings support minority stress theory (Meyer, 1995), however they also suggest the need for an integration of external and internal factors within the model in order

to appreciate the core position of self-esteem in the findings. In essence, the cognitive dissonance mechanism adds this element and explains how external stressors and internal discord combine to generate pressure on the 'self'. If the person is unable to maintain their sense of being good, worthy, effective, desirable, deserving, or respectable, in the face of negative perceptions in the outside world, they might resolve the inconsistency by adopting the stigma themselves. This negative internalization described elsewhere as internalized trans-phobia, while initially reducing dissonance, will decrease self-esteem and in the long run may have a negative impact on mental health, as several studies have shown (Bouman et al., 2016; Grossman & D'Augelli, 2007; Lee et al., 2020; Scandurra et al., 2020; Strain & Shuff, 2010). The struggle with body image dissatisfaction (Witcomb et al., 2015), and the dissonance generated in this way, may also play a role (Tankersley et al., 2021). The expression of prolonged inner discord into self-harm or suicidal behavior may further lower self-esteem and increase mental distress. In this light, it stands to reason that positive affirmations of one's gender identity to generate greater gender congruence can help promote self-esteem and contribute to well-being (Glynn et al., 2016; Ho & Mussap, 2017; McNeil et al., 2013 Budge et al., 2013; Mullen & Moane, 2013). Together with social support this will promote greater emotional stability (Edwards et al., 2020). Moreover, effective gender-confirming medical interventions to aid transitioning, which in turn reduce incongruence and therefore dissonance, have been confirmed in a systematic review as reducing mental distress (Dhejne et al., 2016). In sum, the findings justify including the dissonance perspective in further transgender research in which the measurement of dissonance, beyond the succinct gender comfort measure, deserves further examination. This will require creative effort, because how to measure dissonance comprehensively is complex and still subject to debate (Vaidis & Bran, 2019).

In terms of mental health support, it was puzzling that the levels of mental distress in those that had reported having sought mental health support was no different from those who had not. Should we assume that mental health support

was helpful to those seeking it and that their levels of mental distress had been much higher before? Or should we think that mental health support did not help enough? The latter perspective coincides with other Irish research which report a litany of issues, such as uninformed, insensitive practitioners, underdeveloped, inappropriate services, inaccessibility, waiting lists, and the burdensome cost of transitioning (Higgins et al., 2016a; Collins & Sheehan, 2004; Mullen & Moane, 2013; McNeil et al., 2013; McCann & Sharek. 2014, McCann, 2015). Systematic reviews of the international literature (Aylagas-Crespillo et al., 2018; Brown et al., 2018) confirm that these problems are not unique to Ireland. This does not mean that the expertise does not exist. For instance, more advanced standards of mental health support for transgender people have been outlined and are in use elsewhere (Cohen-Kettenis & Pfäfflin, 2010; Coleman, 2017; Coleman et al., 2012; Delemarre-Van De Waal & Cohen-Kettenis, 2006). Our study's findings suggest that there is a strong need to put these standards into practice in Ireland.

While it is evident that mental health support for the transgender community in Ireland needs to be improved, early intervention and prevention may be essential. This conclusion was drawn on the basis of a large study among transgender teens in the USA (Reisner et al., 2015). Other than this, it is perhaps important to highlight, as one of our participants did (*'I am glad I am different and just like some other very cool people'*), that there are positive elements to the transgender identity (Mullen & Moane, 2013). A five-factor tool to measure positive transgender identity proposed by Riggle and Mohr (2015) suggests that authenticity, social support and intimacy, peer support, commitment to social justice and compassion, and self-awareness are essential factors. Just as in our study, these five factors reflect a mixture of external and internal elements. In a further study, it might be useful to emphasize such positive elements. In addition to what has been learned about avoiding or reducing mental distress, this could help develop more advanced insights into how positive mental health can be achieved and supported in the transgender community.

Strength and limitations of the study

Given that transgender identities are often not adequately represented within LGBTQI + research, the high number of transgender participants (the highest to date in Ireland) is a strength of the study. Nonetheless, its representativeness of the transgender population in Ireland should not be assumed. Self-selection and the online access may have introduced bias into the sample. Also, efforts to recruit young people have perhaps been more successful than anticipated and led to a slight over-representation. Besides, with the wide range in estimates of prevalence in the Republic of Ireland (Chevallier et al., 2019) it is hard to determine with precision the sample size needed.

The length of the survey was such that some important aspects relevant for specific LGBTI groups had to be omitted. For instance, questions on gender affirming medical treatment (GAMT) relevant for the transgender group were not included. As a result, costs/benefits of GAMT for mental health could not be identified in this study.

The researchers recognize that surveys on mental health, such as this, which are highly focused on negative aspects, can be burdensome, as some participants described. As a follow-up is being developed, a more balanced approach will be used aiming to identify positive coping and how this promotes mental health and reduces dissonance discomfort. A focus on resilience is also warranted (Higgins et al., 2016a; Ho & Mussap, 2017; Tankersley et al., 2021; Wanta & Unger, 2017). Finally, transgender-specific aspects, such as body image, coping with transitioning and GAMT will be included in the follow-up.

Implications for mental health support for people who identify as transgender

- The strong relationship between low self-esteem and mental distress suggests that mental health practitioners should focus on enhancing self-esteem and incorporate gender affirming strategies within inclusive care that responds to the specific needs of transgender clients and patients.
- Secondary schools have an important role to play in the socialization and identity formation of young people who identify as transgender. They need to do more to offer protection and support.
- The minority stress model and the dissonance mechanism in tandem provide insight into the pressures experienced by transgender people. Transgender affirmative culture and practices within mental health services can be built on this insight.
- Considering the incidence of reported harassment and violence in this study it is evident that there is an urgent need for policymakers to address these drivers of mental health disparities in gender minority populations.

Note

1. The terms LBGTQ or LGBTQI + are more generally used today, but in the present study the term 'Intersex' was used and previous publications on this study have also used the term LGBTI.

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